

# FIELD MAINTENANCE PRINT SET

## TABLE OF CONTENTS

### UNIT VARIATIONS COVERED BY THIS PRINT SET

**RH780-AB**

PRINT SET ORDER NO  
MP00490

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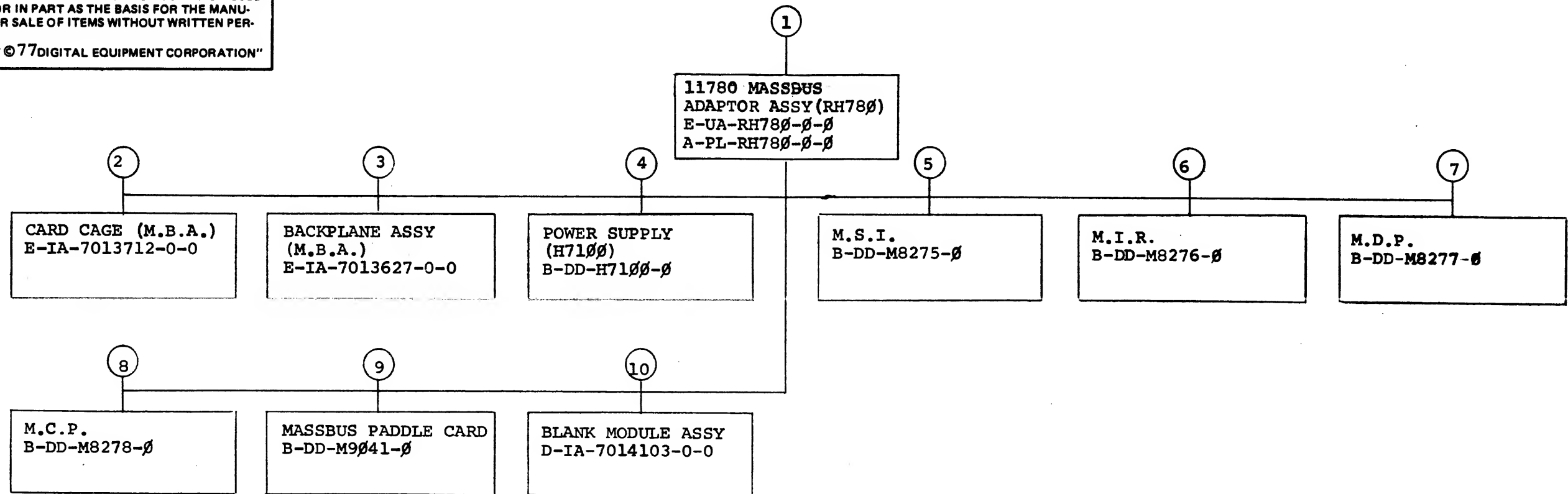
REVISIONS		CHANGE NO.	REV.
CHK	RH780-0000B	A	
K. OKIN			
PG.	RH780-00002	B	
	RH780-3	C	

USED ON OPTION/MODEL		DRN.	DATE	TITLE									
11780		P. BOUDREAU	SEP 77	11780 MASSBUS ADAPTOR ASSY (RH780)									
		CHK'D.	DATE										
		D. HEALY	NOV 77										
		PROJ. ENG.	DATE										
		K. OKIN 9725	15 NOV 77	SIZE	CODE	NUMBER						REV	
		PROD.	DATE	B	DD	RH780-0						C	
SHEET 1 OF 3		Grant Lee	11/17/77	DIST.									

digital

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REV. C  
NUMBER 11780-0  
SIZE B  
CODE DD

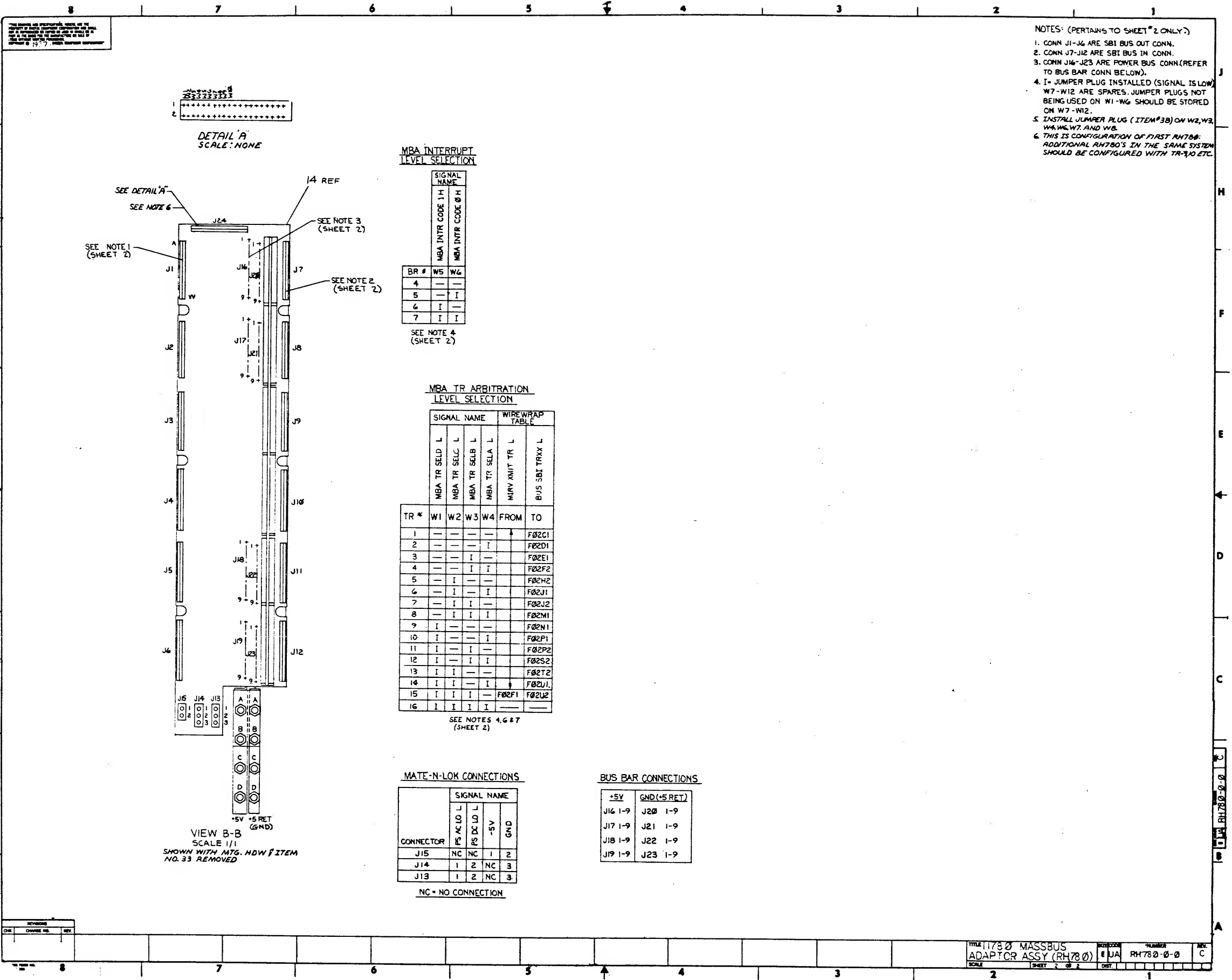


TITLE	SIZE	CODE	NUMBER	REV
11780 MASSBUS ADAPTOR ASSY (RH780)	B	DD	RH780-0	C
SHEET 2 OF 3				

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE	FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	MP00497	11780 MASSBUS ADAPTOR ASSY (RH780) (MP)	-		C-MD-7411399-0-0	STRIP, FIBERGLASS	M
	B-TC-RH780-0-1	11780 MASSBUS ADAPTOR ASSY (RH780) (TC)	-		A-DC-7411881-0-0	DECAL AWT REV. STATUS	M
	E-UA-RH780-0-0	11780 MASSBUS ADAPTOR ASSY (RH780)	E/M				
	A-PL-RH780-0-0	11780 MASSBUS ADAPTOR ASSY (RH780) (PL)	E/M				
	B-IA-7418902-0-0	PLATE, STUD	M				
	B-MD-7418903-0-0	"U" BAR	M		K-WL-7013627-0-1	WIRE LIST M.B.A.	E
	B-MD-7419084-0-0	PLATE, HOLDING	M		A-WT-7013627-0	A.W.T. REV. STATUS	E
	B-MD-7419485-0-0	COVER, BUS BAR	M				
	D-IC-11780-0-1	11780 SYSTEM POWER DIAGRAM	E/M				
	D-IC-11780-0-2	11780 SYSTEM INTERCONNECT DIAGRAM	E/M				
	D-IC-11780-0-3	11780 SUB SYSTEM INTERCONNECT	E/M				
	D-MU-RH780-0-2	MODULE UTILIZATION MASSBUS ADAPTOR	E/M	4	B-DD-H7100-0	POWER SUPPLY (H7100)	E/M
	D-TD-RH780-0-4	M.B.A. TIMING DIAGRAM	E				
	D-FD-RH780-0-5	M.B.A. FLOW DIAGRAM	E				
	D-IA-7014212-0-0	CABLE, AC, DC LO	E/M				
	D-IA-7014530-0-0	CABLE, POWER (RED)	E/M	5	B-DD-M8275-0	M.S.I.	E/M
	D-IA-7014249-0-0	CABLE, POWER (BLACK)	E/M				
	C-MD-7419450-0-0	COVER, M.B.A. BACKPLANE	M				
	D-IA-1700087-00	CABLE, COAX RIBBON	F/M				
	D-IA-BC06R-10	BC06R I/O CABLE (10 ft)	E/M				
	D-IA-7014213-0K	CABLE, OVER TEMP.	E/M	6	B-DD-M8276-0	M.I.R.	E/M
				7	B-DD-M8277-0	M.D.P.	E/M
2	E-IA-7013712-0-0	CARD CAGE (M.B.A.)	M				
	C-MD-7417930-0-0	MTG. BAR VERTICAL	M				
	C-MD-7417966-0-0	BRACKET BOTTOM REAR	M				
	B-MD-7417963-0-0	BRACKET CARD GUIDE	M				
	C-MD-7417967-0-0	BRACKET BOTTOM CARD GUIDE	M	8	B-DD-M8278-0	M.C.P.	E/M
	C-MD-7417964-0-0	BRACKET TOP CARD GUIDE	M				
	C-MD-7417942-0-0	HANDLE, CARD CAGE	M				
	C-MD-7417965-0-0	BRACKET TOP REAR	M				
	C-MD-7418194-0-0	STIFFENER, CARD CAGE	M				
	C-MD-7418181-0-0	STIFFENER, CORNER	M	9	B-DD-M9041-0	MASSBUS PADDLE CARD	E/M
3	E-IA-7013627-0-0	BACKPLANE ASSY (M.B.A.)	M	10	D-IA-7014103-0-0	BLANK MODULE ASSY	M
	E-MD-5012867-0-0	BOARD DRILL AND ETCH. M.B.A.	M		E-MD-7418172-0-0	BLANK MODULE	M
	B-MD-7417973-0-0	BLOCK SPACER	M				
	C-MD-7417866-0-0	BAR MOUNTING	M				
	B-MD-7419254-0-0	REWORK, CONN. BLOCK	M				
	D-PS-1214348-0-0	BUS BAR	M				
TYPE: E ELECTRICAL M MECHANICAL E/M ELECTRO/MECHANICAL				TITLE 11780 MASSBUS ADAPTOR ASSY (RH780)		SHEET 3 OF 3 SIZE B DD	CODE NUMBER RH780-0 REV C







DIGITAL EQUIPMENT CORPORATION  
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY  
W. FISHER

CHECKED  
D. HEALY

SECTION  
1

DATE  
11 JUL 77

DATE  
26 JUL 77

ENG  
James A Olin

PROD  
E. J. P. P.

ISSUED SECT.  
1

DATE  
9/14/77

DATE  
11/9/77

ITEM NO.	DWG NO./PART NO.	DESCRIPTION
1	E-IA-7013712-0-0	CARD CAGE (MBA)
2	E-UA-H7100-A-0	H7100-A POWER SUPPLY 115V AC
3	E-UA-H7100-B-0	H7100-B POWER SUPPLY 230V AC
4	E-UA-M8275-0-0	MSI
5	E-UA-M8276-0-0	MIR
6	D-UA-M8277-0-0	MCP
7	E-UA-M8278-0-0	MCP
8	D-UA-M9041-0-0	MASS BUS PADDLE CARD
9	D-IA-7014103-0-0	BLANK MODULE ASSY
10	B-IA-7418902-0-0	PLATE, STUD
11	B-MD-7418903-0-0	"U" BAR
12	B-MD-7419034-0-0	PLATE, HOLDING
13	B-MD-7419485-0-0	COVER, BUS BAR
14	E-IA-7013627-0-0	BACK PLANE ASSY (MBA)
15	1212405-00	CARD GUIDE SINGLE (NATURAL)
16	1212405-01	CARD GUIDE SINGLE (MAGENTA)
17	9006610-00	NUT, CAP RELOCK #10-32
18	9006565-00	NUT, KEP #10 - 32
19	9008032-01	SCR PH HD PAN #4 - 40 x .19
20	9006655-00	WASH, FLAT, .31 o.d. x .12 id. x .03
21	9006043-01	SCR PH HD PAN 8 - 32 x 1.00
22	9006660-00	WASH. FLAT, .038 o.d. x .19 id. x .06

TITLE  
11780 MASSBUS ADAPTOR ASSY  
(RH780)

ASSY NO.  
E-UA-RH780-0-0

SIZE  
A

CODE  
PL

NUMBER  
RH780-0-0

REV  
C

ECO NO.  
RH780-00003

DEC FORM  
DRA 110

720

DIGITAL EQUIPMENT CORPORATION  
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY  
W. FISHER

CHECKED  
D. HEALY

SECTION  
1

DATE  
11 JUL 77

DATE  
26 JUL 77

ENG  
James A Olin

PROD  
E. J. P. P.

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1

DATE  
9/14/77

DATE  
11/9/77

ITEM NO.	DWG NO./PART NO.	DESCRIPTION
23	9006563-00	NUT, KEP #8 - 32
24	9006073-01	SCR, PH HD PAN #10 - 32 x .50
25	9007506-00	WASHER, LOCK SPLIT #10
26	1211630-00	CARD GUIDE
27	D-IC-11780-0-3	11780 SUB SYSTEM INTERCONNECT
28	D-IC-11780-0-2	11780 SYSTEM INTERCONNECT DIAGRAM
29	D-IC-11780-0-1	11780 SYSTEM POWER DIAGRAM
30	D-MU-RH780-0-2	RH780 MODULE UTILIZATION
31	3613281-03	LABEL, ADHESIVE BACKED PRINT (6 SLOT)
32	7014212-0M	CABLE AC, DC IO
33	C-MD-7419450-0-0	COVER, M.B.A. BACKPLANE
34	7014530-0L	CABLE POWER (RED)
35	7014249-0L	CABLE POWER (BLACK)
36	1700087-0-0	COAX RIBBON CABLE (SBI) (4 in)
37	7014212-0H	CABLE AC, DC IO
38	1214314-00	PLUG, JUMPER
39	3615087-02	LABEL, DANGER
40	D-UA-BC06R-10-0	BC06R I/O CABLE (10 ft)
41	7014213-0K	CABLE, OVER TEMP
42	9009642-00	SCR SEMS PH HD PAN #832 x .25
43	3614747-00	LABEL, MODULE UTILIZATION RH780

TITLE  
11780 MASSBUS ADAPTOR ASSY  
(RH780)

ASSY NO.  
E-UA-RH780-0-0

SIZE  
A

CODE  
PL

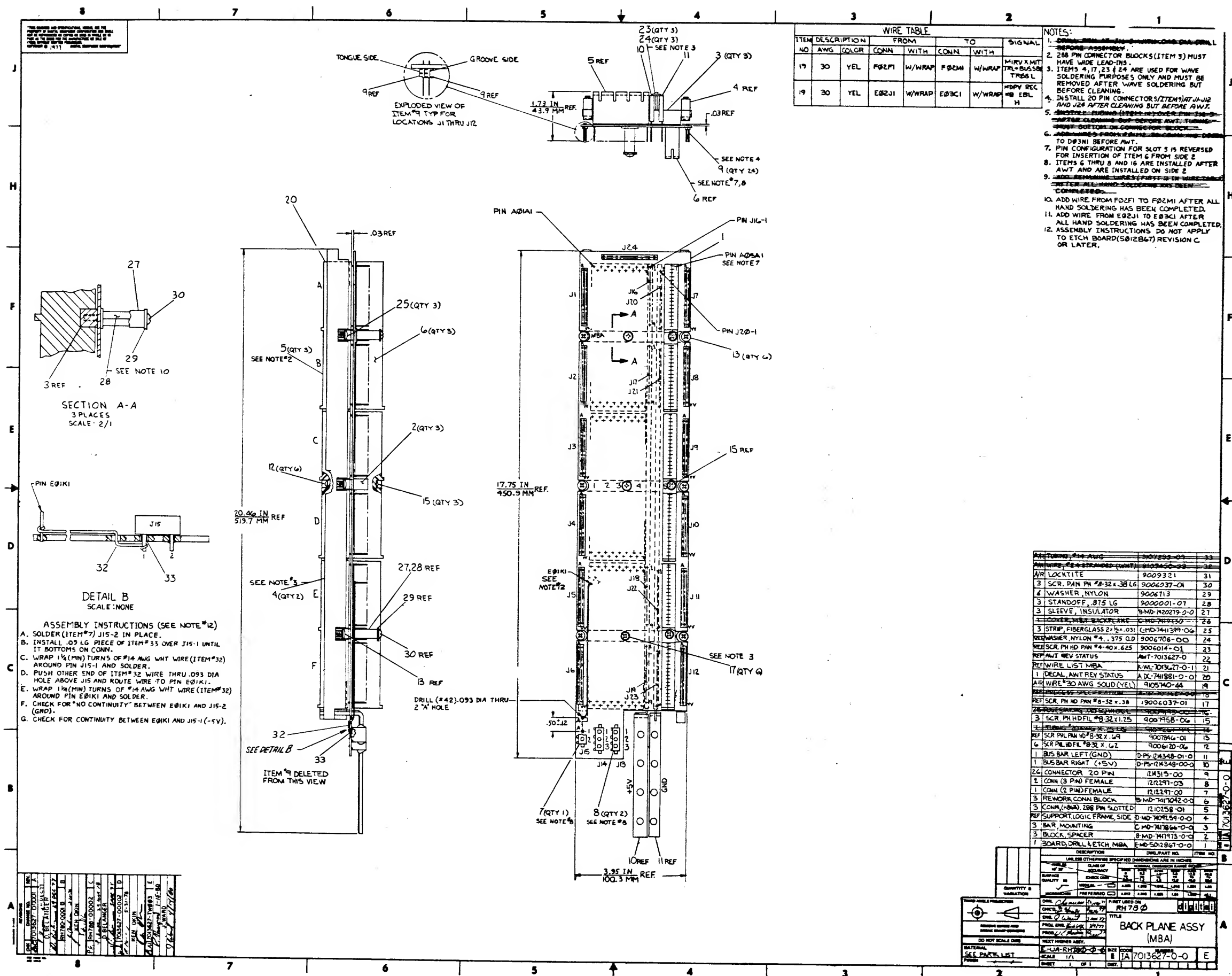
NUMBER  
RH780-0-0

REV  
C

ECO NO.  
RH780-00003

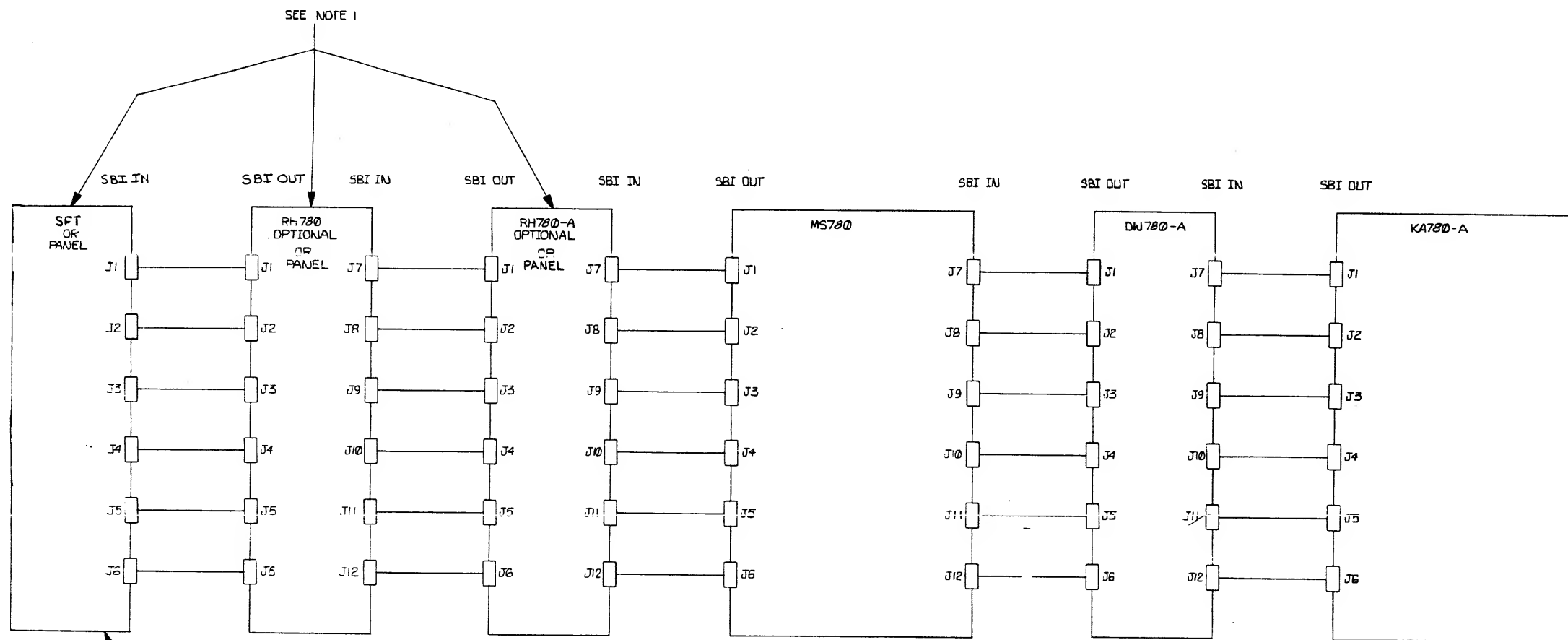
DEC FORM  
DRA 110

720



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8 7 6 5 4 3 2 1  
8 3-0-08711 IC 2 1  
11780-0-3



NOTES:

- 11780-C SYSTEM CONSISTS OF
  - KA780-A
  - DW780-A
  - MS780
  - SFT (# M9043)
  - 2 DUMMY PANELS (# 7418973)
- 11780-D SYSTEM CONSISTS OF
  - KA780-A
  - DW780-A
  - MS780
  - RH780-A
  - RH780
  - SFT
- SBI CABLE CONNECTIONS TO SFT FROM ADJACENT BACKPLANE ARE ALWAYS 1700087-1 (QUANTITY 6) OTHER SBI CABLES ARE 1700087-0

(BACKPLANE S.B.I. INTERCONNECT)

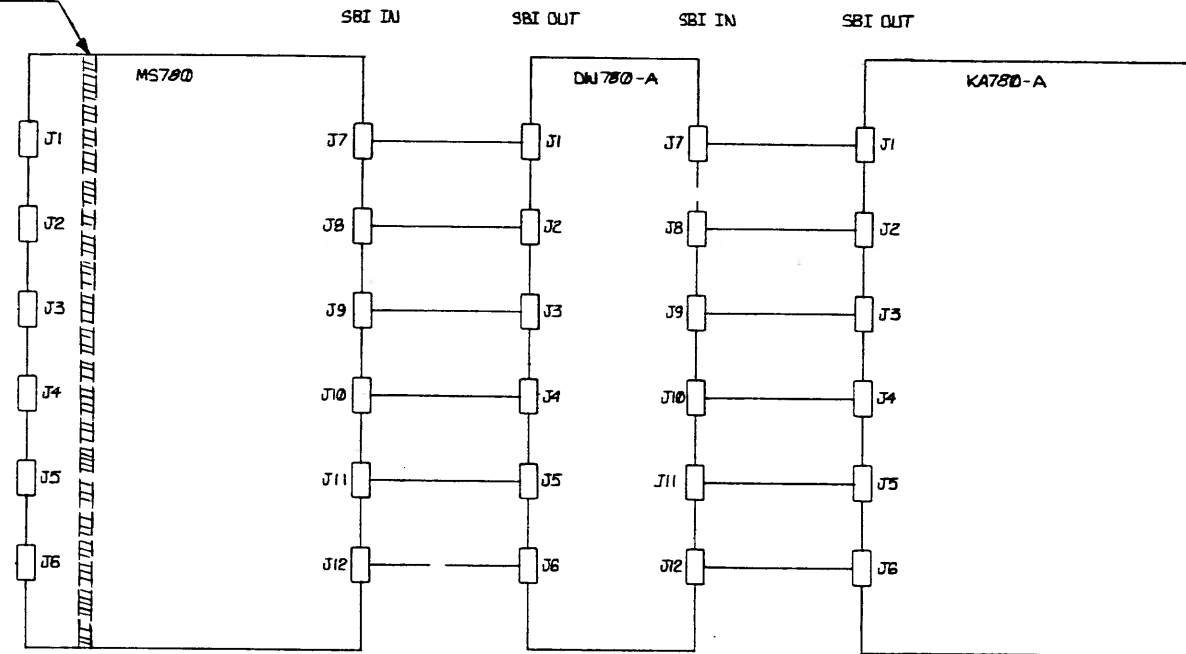
DRN. E. TAYLOR	7/10/77	FIRST USED ON	11780
CHK'D D. X. 10/77	1/10/77	TITLE	11780 SUB SYSTEM INTERCONN.
ENG'D D. X. 10/77	1/10/77	SIZE	D IC 11780-0-3
PROJ. ENG. 1/10/77	1/10/77	NUMBER	REV. B
PROD. R. 1/10/77	1/10/77	SCALE	
NEXT HIGHER ASSY.		SHEET	1 OF 8
2-DD-11780-0		DIST.	

TW 1

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11780-0-3

SEE NOTE 1



NOTES:

- 1) 11780 CU+CV SYSTEM CONSISTS OF
  - A. KA780 A
  - B. DW780 A
  - C. MS780
  - D. TRM (M9040) MOUNTED IN SLOTT\* 1 OF MS780 BACKPLANE.

THIS SHEET FOR  
CU+CV VARIATIONS  
ONLY

(BACKPLANE S.B.I. INTERCONNECT)

DRN. <i>Reg Lennan</i> 9/17/79	FIRST USED ON	11780	<b>digital</b>		
CHK'D	ENG.				
PROJ. ENG.	PROD.				
NEXT HIGHER ASSY.					
2-DD-11780-0		SIZE CODE	NUMBER	REV.	
SCALE		D	IC	11780-0-3	B
SHEET 2 OF 8		DIST.			

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D

C

B

A

REVISIONS  
CHK CHANGE NO. REV.

DATE 1000 IN 1000

BUS SBI B00 L  
BUS SBI B01 L  
  
BUS SBI B02 L  
  
BUS SBI B03 L  
  
BUS SBI B04 L  
BUS SBI B07 L  
BUS SBI B05 L  
  
BUS SBI B06 L  
BUS SBI B08 L  
BUS SBI B09 L  
BUS SBI B10 L  
BUS SBI B11 L

BUS SBI B12 L  
BUS SBI B14 L  
  
BUS SBI B13 L  
  
BUS SBI B15 L  
  
BUS SBI B16 L  
  
BUS SBI B17 L  
BUS SBI B18 L  
BUS SBI B19 L

BUS SBI B20 L  
BUS SBI B23 L  
  
BUS SBI B22 L  
  
  
BUS SBI B24 L  
BUS SBI B27 L  
BUS SBI B25 L  
BUS SBI B28 L  
BUS SBI B26 L  
BUS SBI B29 L  
BUS SBI B30 L  
BUS SBI FAIL L  
BUS SBI B31 L

BUS SBI M0 L  
BUS SBI DEAD L  
BUS SBI M1 L  
  
BUS SBI M3 L  
BUS SBI M2 L  
BUS SBI P0 L  
BUS SBI SPARE 0  
BUS SBI P1 L

BUS SBI SPARE 1  
BUS SBI TAG0 L  
BUS SBI ID0 L  
BUS SBI TAG1 L  
  
BUS SBI ID1 L  
BUS SBI TAG2 L  
BUS SBI ID2 L  
BUS SBI ID3 L  
BUS SBI ID4 L

BUS SBI REQ4 L  
BUS SBI REQ7 L  
BUS SBI REQ5 L  
  
BUS SBI TP L  
  
BUS SBI REQ6 L  
BUS SBI PCLK H  
BUS SBI TP H  
  
BUS SBI PDCLK H  
BUS SBI PDCLK L  
BUS SBI PDCLK L  
BUS SBI MP2 L  
BUS SBI MPI L  
  
BUS SBI ALERT L  
BUS SBI UNJAM L  
BUS SBI CNF0 L  
BUS SBI FAULT L  
BUS CNFI L

BUS SBI INTLK L  
BUS SBI TR01 L  
BUS SBI TR02 L  
  
BUS SBI TR03 L  
BUS SBI TR02 L  
BUS SBI TR04 L

BUS SBI TR05 L  
BUS SBI TR06 L  
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BUS SBI TR08 L

BUS SBI TR09 L  
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BUS SBI TR11 L  
BUS SBI TR13 L

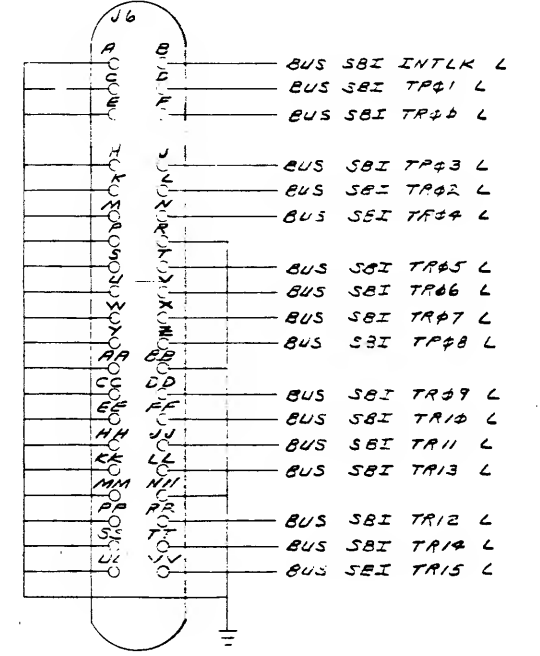
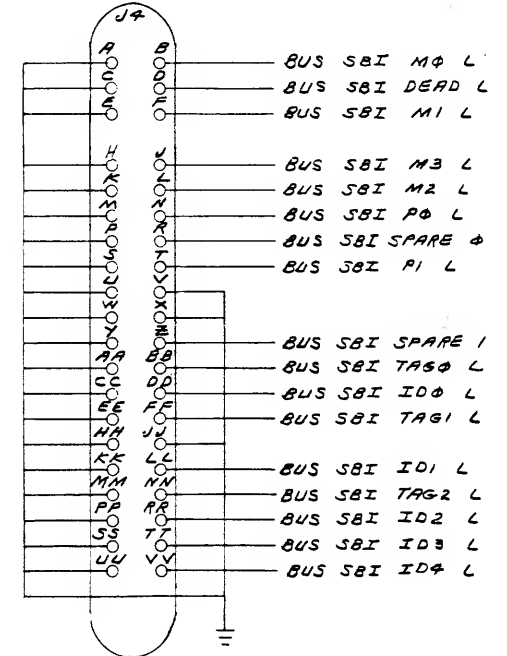
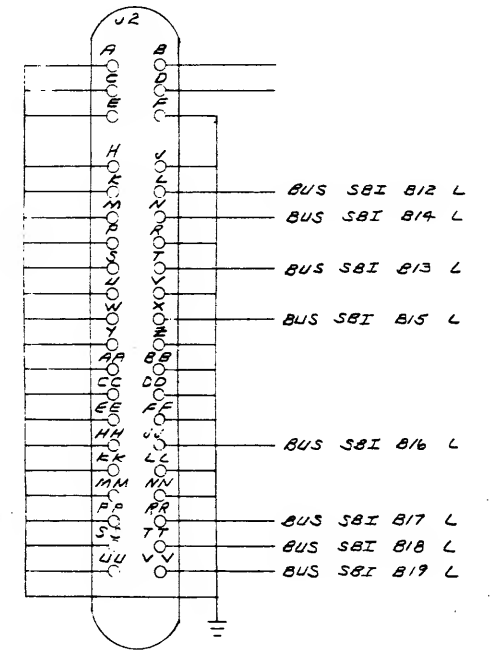
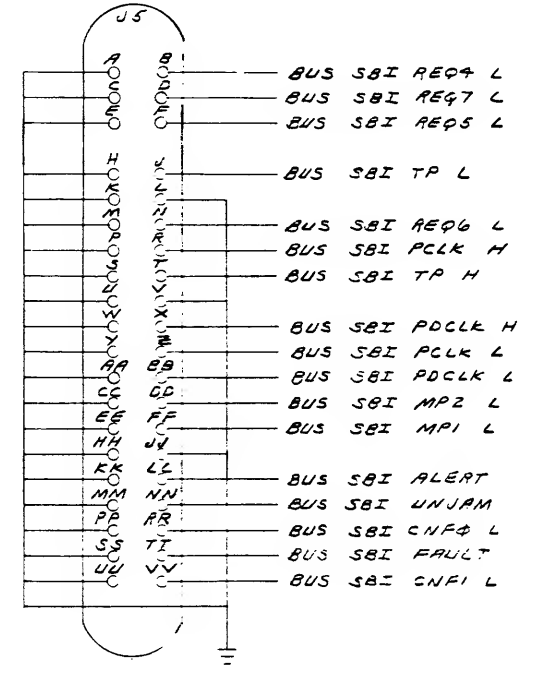
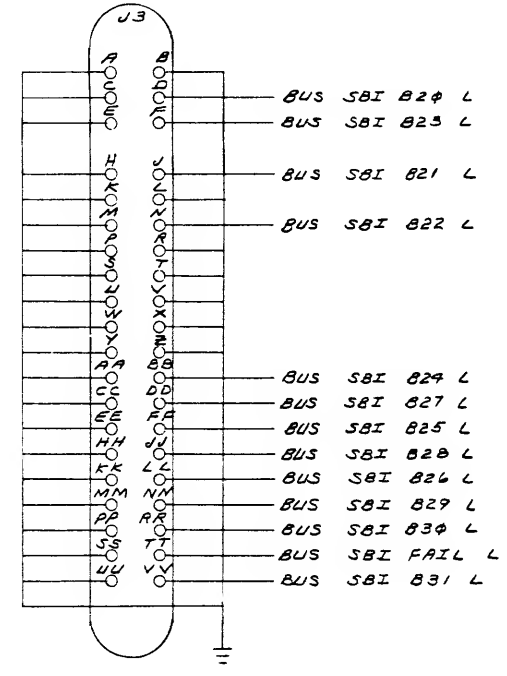
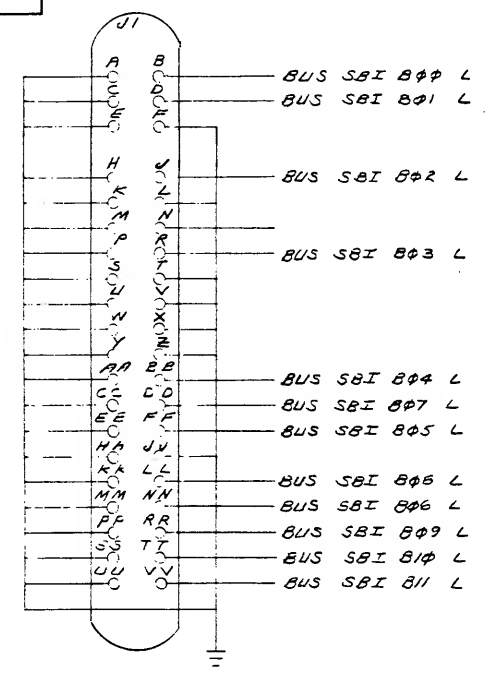
BUS SBI TR12 L  
BUS SBI TR14 L  
BUS SBI TR15 L

(SBI IN)

DRN. E Taylor	25 JUL 77	FIRST USED ON	11780	digital	
CHK'D. D. Mandy	16 AUG 77	TITLE	11780 SUB SYSTEM INTERCONNECT		
ENG. Ed. D. Mandy	16 SEP 77	SIZE	D		
PROJ. ENG. A. L. Mandy	16 SEP 77	CODE	IC		
PROD. R. R. Mandy	11-18-77	NUMBER	11780-0-3		
NEXT HIGHER ASSY.		SCALE	1:1	REV.	B
B-DD-11780		SHEET	3 OF 3	DIST.	

TW 1

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(SBI OUT)

DRN. E. TAYLOR	25 JUL 77	FIRST USED ON	11780	digital	
CHK'D. S. J. LEE	16 AUG 77	TITLE	11730 SUB SYSTEM INTERCONNECT		
ENG. S. J. LEE	16 AUG 77	PROD. R. J. LEE	11-18-77		
PROJ. ENG. S. J. LEE	16 AUG 77	NEXT HIGHER ASSY.			
SCALE			SIZE CODE		NUMBER
SHEET 4 OF 5			D IC	11780-0-3	B

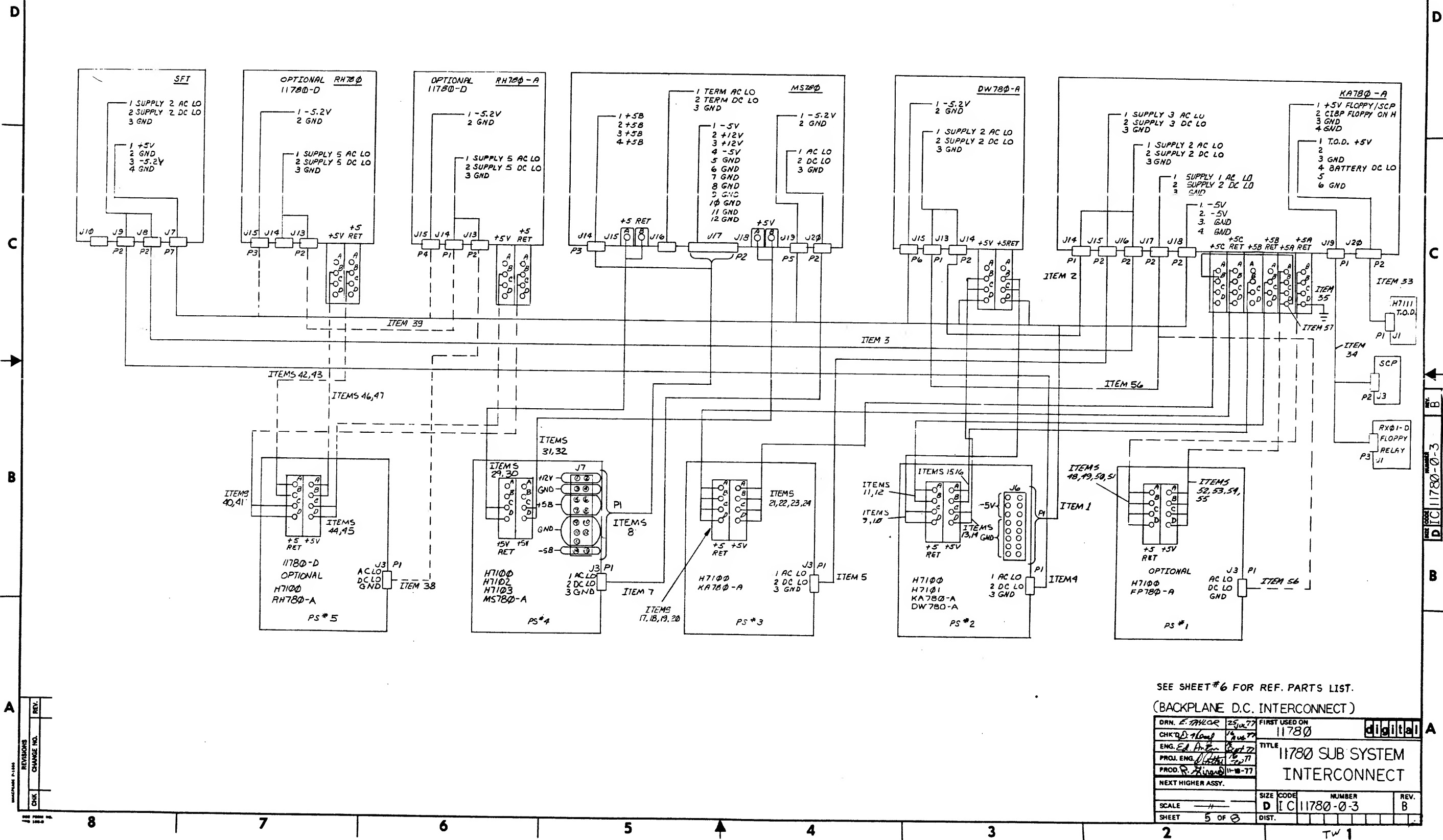
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# NOTES:

- ITEM # 5 ARE SHOWN FOR REFERENCE IN LOCATING CABLE DESTINATIONS ONLY USING SHEET 6 D-11780-0-3



SEE SHEET #6 FOR REF. PARTS LIST.

(BACKPLANE D.C. INTERCONNECT)

DRN. E. THOR 25 JUL 77	FIRST USED ON	11780	Digital
CHKD. D. 16 AUG 77	DATE	12 AUG 77	
ENG. E. A. 16 AUG 77	TITLE	11780 SUB SYSTEM	
PROJ. ENG. 16 AUG 77	INTERCONNECT		
PROD. R. 16 AUG 77			
NEXT HIGHER ASSY.			
SCALE	SIZE	CODE	NUMBER
SHEET 5 OF 8	D	IC	11780-0-3
			REV. B

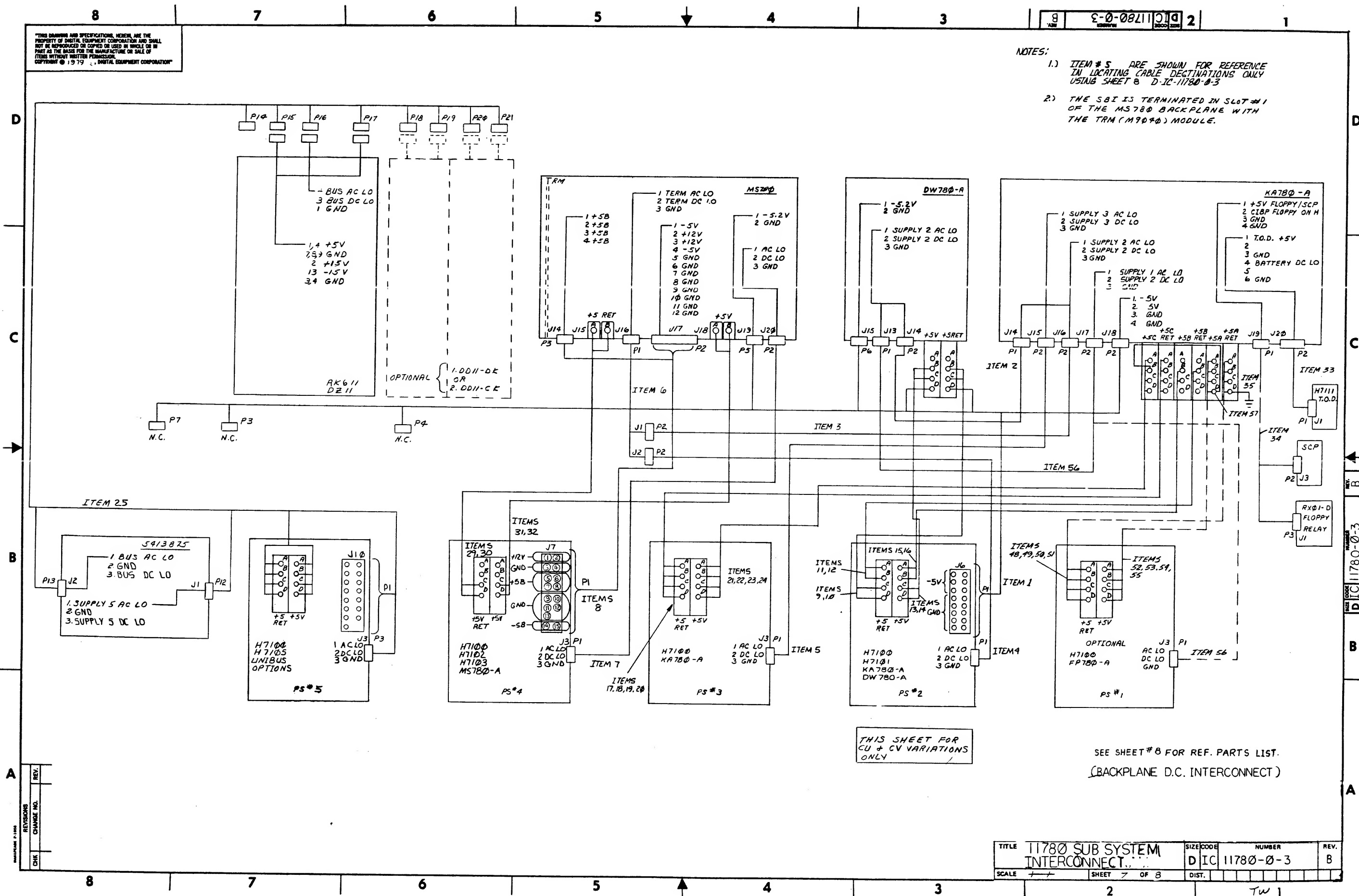
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# NOTES:

- ITEM #5 ARE SHOWN FOR REFERENCE IN LOCATING CABLE DESTINATIONS ONLY USING SHEET B D-IC-11780-0-3
- THE SBI IS TERMINATED IN SLOT #1 OF THE MS780 BACKPLANE WITH THE TRM (M900) MODULE.



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11780-CU/CV

11780-CU/CV

REF ITEM NUMBER	PART NUMBER	DESCRIPTION	FROM	TO	REMARKS
1	7015073-0-0	HARNESS-SV TERMINATOR	HARNESS - P1	PS #2 - J6	-5V GND
			HARNESS - P2	KA780-J18	
			HARNESS - P5	MS780-J19	
			HARNESS - P6	DW780-J15	-5V GND
			HARNESS - P7	N.C.	+5V GND
			HARNESS RING TERM. (RED WIRE)	DW780+5V-D	+5V
	7015073-0-0	HARNESS-SV TERMINATOR	HARNESS RING TERM. (BLK WIRE)	DW780+5V-RT-D	+5V RETURN
2	7014212-0H	CABLE AC DC LOW	CABLE - P1	KA780-J14	AC,DC LOW+GND
			CABLE - P2	DW780-J14	
3	7014212-2M	CABLE AC DC LOW	CABLE - P1	KA780-J16	AC,DC LOW+GND
			CABLE - P2	ITEM #6-J1	
4	7014212-2M	CABLE AC DC LOW	CABLE - P1	PS #2 - J3	AC,DC LOW+GND
			CABLE - P2	ITEM #6-J2	
5	7014212-0M	CABLE AC DC LOW	CABLE - P1	PS #3 - J3	AC,DC LOW+GND
			CABLE - P2	KA780-J15	
6	7014212-0J	AC DC LOW WYE CABLE	CABLE - P1	MS780-J16	AC,DC LOW+GND
			CABLE - J1	ITEM #3-P2	
			CABLE - J2	ITEM #4-P2	
7	7014212-1C	CABLE AC DC LOW	CABLE - P1	PS #4 - J3	AC,DC LOW+GND
			CABLE - P2	MS780-J20	
8	7014212-0K	CABLE ±5B + +12V	CABLE - P1	PS #4 - J7	±5B +12V+GND
			CABLE - P2	MS780-J17	
			CABLE - P3	MS780-J14	
9	7014249-1A	CABLE POWER (BLK)	PS #2 +5 RET -D	DW780+5 RET-B	PS #2+5 RETURN
10	7014249-1A	CABLE POWER (BLK)	PS #2 +5 RET -C	DW780+5 RET-C	
11	7014249-1C	CABLE POWER (BLK)	PS #2 +5 RET -B	KA780+5B RET-B	
12	7014249-1C	CABLE POWER (BLK)	PS #2 +5 RET -A	KA780+5B RET-C	PS #2+5 RETURN
13	7014530-1A	CABLE POWER (RED)	PS #2 +5V -D	DW780+5V-B	PS #2 +5V
14	7014530-1A	CABLE POWER (RED)	PS #2 +5V -C	DW780+5V-C	
15	7014530-1A	CABLE POWER (RED)	PS #2 +5V -B	KA780+5B-C	
16	7014530-1A	CABLE POWER (RED)	PS #2 +5V -A	KA780+5B-B	PS #2 +5V
17	7014249-1J	CABLE POWER (BLK)	PS #3 +5V RET -D	KA780+5C RET-D	
18			-C	-C	
19			-B	-B	
20	7014249-1J	CABLE POWER (BLK)	PS #3 +5V RET -A	KA780+5C RET-A	PS #3+5 RETURN
21	7014530-1E	CABLE POWER (RED)	PS #3 +5V -D	KA780+5C -D	PS #3 +5 RETURN
22			-C	-C	
23			-B	-B	
24	7014530-1E	CABLE POWER (RED)	PS #3 +5V -A	KA780+5C-A	
25	7016951-0-0	UNIBUS PWR HARNESS	HARNESS - P1	PS #5 - J10	PS #5+15V,-15V+GND
			HARNESS RING TERM. (BLK WIRE) -P2	PS #5+5 RET -D	PS #5 +5 RETURN
			HARNESS - P3	PS #5 - J3	AC,DC LOW+GND
			HARNESS RING TERM. (RED WIRE) -P4	PS #5+5V -D	PS #5 +5V
			-P5	-C	
			-P6	-B	
			HARNESS RING TERM. (RED WIRE) -P7	PS #5 +5V -A	
			HARNESS RING TERM. (BLK WIRE) -P8	PS #5 +5 RET-D	PS #5 +5 RETURN
			-P9	-C	
			-P10	-B	
			HARNESS RING TERM. (BLK WIRE) -P11	PS #5 +5 RET-A	
	7016951-0-0	UNIBUS PWR HARNESS	HARNESS - P12	ADAPTER BOARD-J1	AC,DC LOW + GND

REF ITEM NUMBER	PART NUMBER	DESCRIPTION	FROM	TO	REMARKS
25	7016951-0-0	UNIBUS PWR HARNESS	HARNESS - P13	ADAPTER BOARD-J2	ADAPT. AC,DC LOW+GND
			-P14	N.C.(OPTIONAL)	
			-P15	RK611 - P2	
			-P16	RK611 - P3	
			-P17	RK611 - P4	
			-P18	NC(OPTIONAL)	
			-P19		
			-P20		
	7016951-0-0	UNIBUS PWR HARNESS	HARNESS - P21	NC.(OPTIONAL)	
29	7014250-0K	CABLE POWER RTR MEMORY (BLK)	PS #4 +5V RET -C	MS780-J15-A	PS #4 +5 RETURN
30			-D	-B	
31	7014529-0K	CABLE POWER +5 MEMORY (RED)	PS #4 +5V -C	MS780-J18-A	PS #4 +5V
32			-D	-B	
33	7014243-3M	CABLE TO T.Q.D. BAT.	HARNESS - P2	KA780-J20	
			-P1	H7111-J1	
34	7014243-21	FLOPPY RELAY SC PWR HARNESS	HARNESS - P1	KA780-J19	
			-P2	SCP - J3	
			-P3	RX01 - J1	
35	7014249-0L	CABLE POWER (BLK)	KA780+5A RET-D	FRAME	
56	7014212-0M	CABLE AC/DC LO	CABLE - P1	DW780-J13	SEE NOTE #3
			CABLE - P2	KA780-J17	

FP780  
OR  
FP780 + KU780

SEE NOTE

48	7014249-0L	POWER CABLE (BLK)	PS #1 +5A RET -D	KA780+5A RET-D	PS #1 +5 RETURN
49			-C	-C	
50			-B	-B	
51	7014249-0L	POWER CABLE (BLK)	PS #1 +5A RET -A	KA780+5A RET-A	
52	7014530-0L	POWER CABLE (RED)	PS #1 +5V -D	KA780+5A -D	PS #1 +5A
53			-C	-C	
54			-B	-B	
55	7014530-0L	POWER CABLE (RED)	PS #1 +5V -A	KA780+5A -A	
56	7014212-0M	CABLE AC DC LO	CABLE - P1	PS #1 - J3	AC,DC LOW+GND
			CABLE - P2	KA780-J17	

OPTIONAL  
SEE NOTE 3

KC780 or KU780

SEE NOTE 2

57	7014530-0L	CABLE POWER (RED)	KA780 +5A -D	KA780+5C-B	PS #2 +5V
----	------------	-------------------	--------------	------------	-----------

## NOTES:

1. REFER TO E-UA-KA780 FOR INSTRUCTIONS OF JUMPER REMOVAL IN CONFIGURATIONS USING PS #1
2. IF THE FP780 IS INSTALLED, REMOVE ITEM 57.
3. IF THE FP780 IS INSTALLED: ITEM #56 P1 CONNECTS TO PS #1-J3 OTHERWISE IT IS CONNECTED TO DW780-J13.

THIS SHEET FOR  
CU+CV VARIATION  
ONLY

REVISION HISTORY		
DATE	ECO NUMBER	REV.

ORD 137A

8

7

6

5

4

3

2

1

TITLE 11780 SUB-SYSTEM  
INTERCONNECT

DOCUMENT NUMBER		
SIZE CODE	NUMBER	REV.
DIC	11780-0-3	B
SCALE	SHEET 8	OF 8

TW

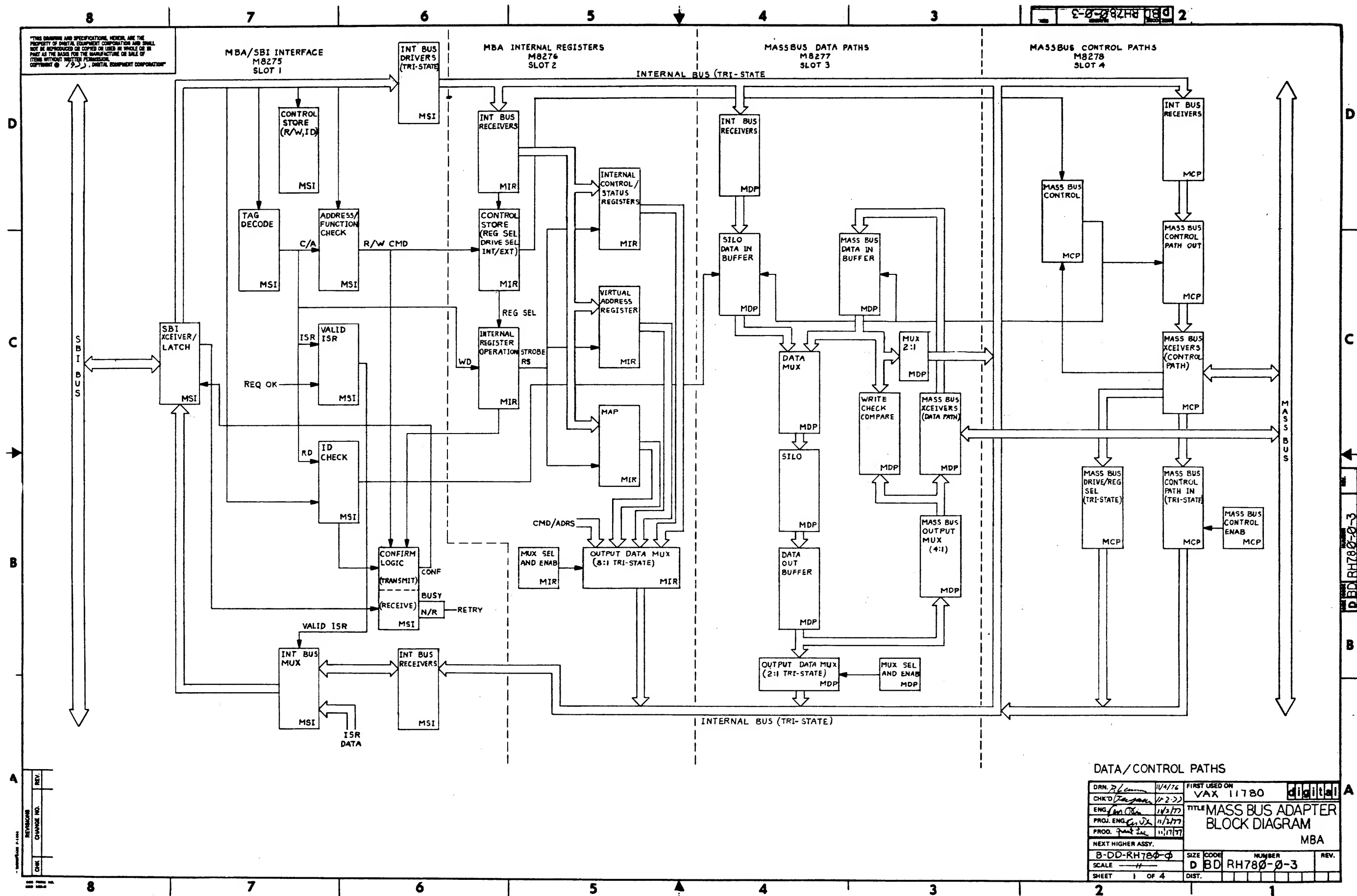
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VIEW FROM SIDE 2

NOTE: 1) FROM PLUGS IN ON SIDE 2  
2) TWO BLANK MODULES ARE  
INSERTED IN SLOTS 5 AND 6  
FROM SIDE 2

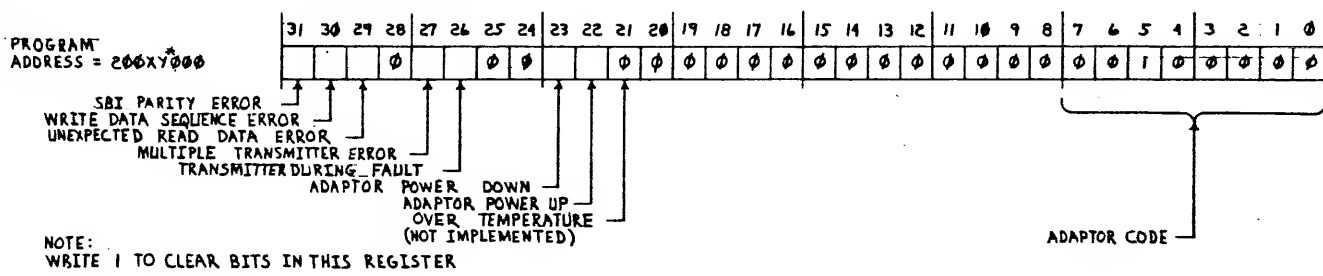
[illegible]

DRAWN. AFM	10-1-77	FIRST USED ON	VAX 11780	DATE	10-1-77
CHK'D. J. J. J.	10-1-77	ENG.	10-1-77	TITLE	MODULE UTILIZATION
PROG. 10-1-77	10-1-77	PROG.	10-1-77	MASSBUS ADAPTOR	
NEXT HIGHER ASSY.					
B-DD-RH780-3			SIZE	CODE	NO. REVISION
SCALE 1/1			D. M. R. H. 780-2		
SHEET 1 OF 1			DIST.		

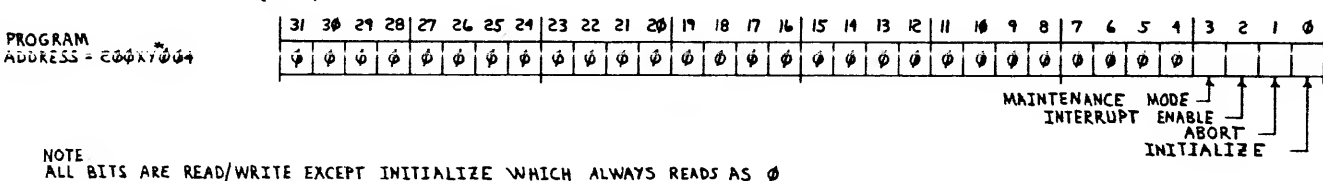


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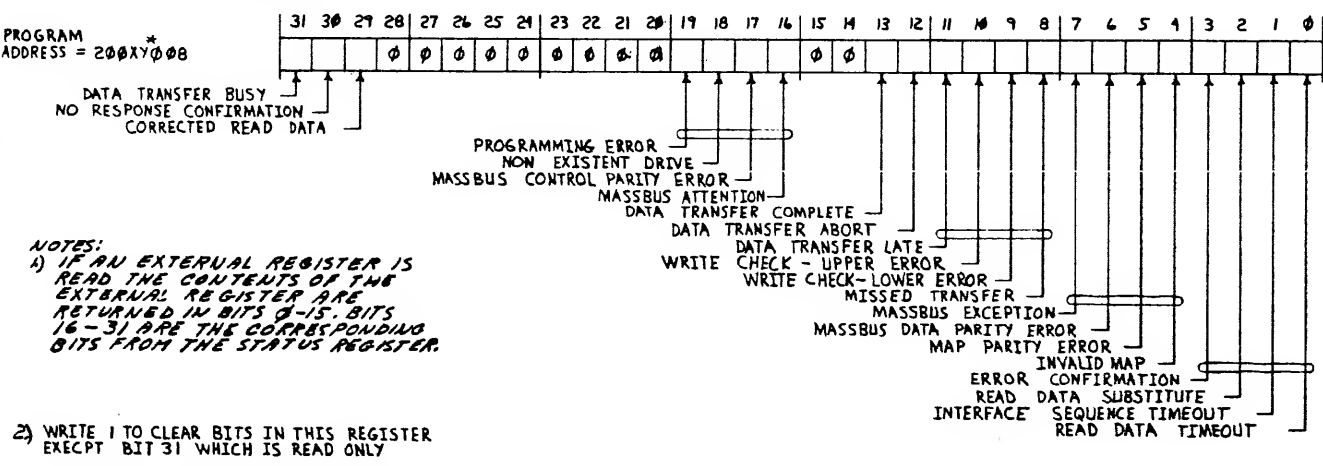
MBA CONFIGURATION/STATUS REGISTER (REG 0)



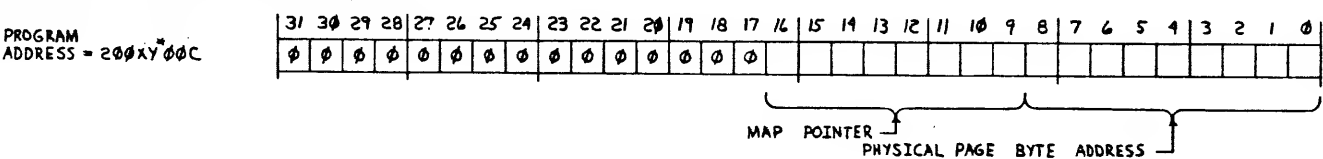
MBA CONTROL REGISTER (REG 1)



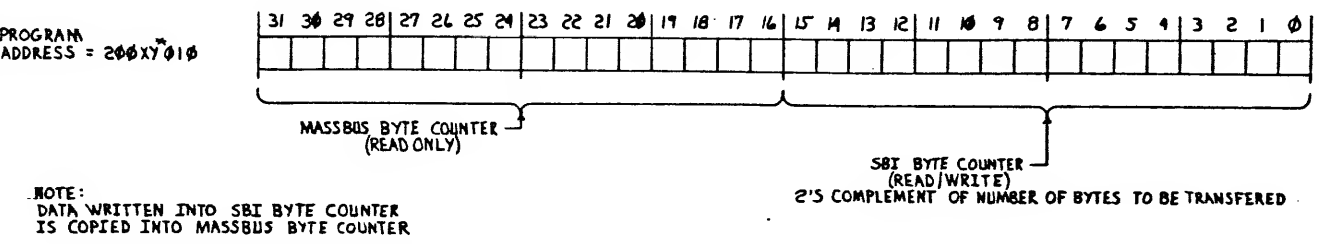
MBA STATUS REGISTER (REG 2)



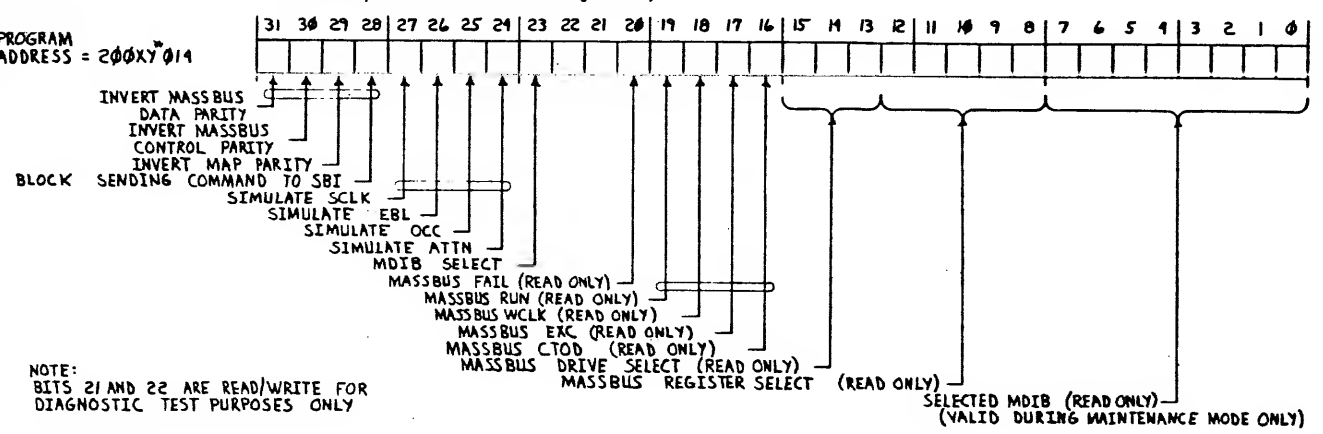
MBA VIRTUAL ADDRESS REGISTER (REG 3)



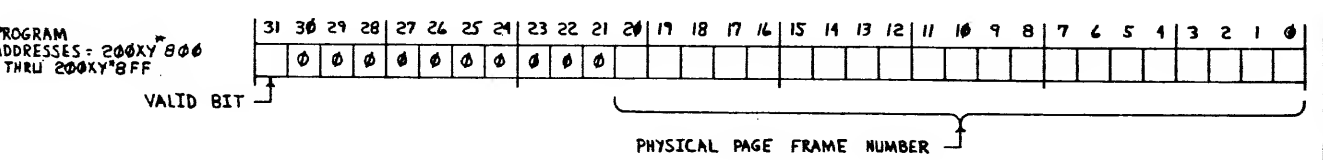
MBA BYTE COUNT REGISTER (REG 4)



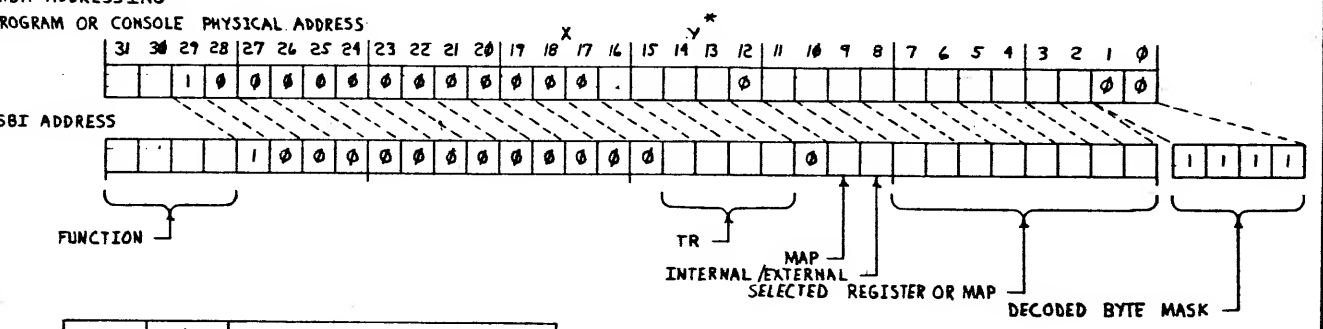
MBA DIAGNOSTIC MASSBUS CONTROL/STATUS REGISTER (REG 5)



MBA MAP REGISTERS

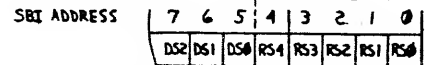


MBA ADDRESSING



MAP SBI B<9>	INT/EXT SBI B<8>	SELECTED REGISTER OR MAP SBI B<7:0>
0	0	INTERNAL REGISTER <5:0>
1	1	EXTERNAL REGISTER <31:0>
1	1	MAP REGISTER <256:0>
1	1	NO RESPONSE

EXTERNAL REGISTER AND DRIVE SELECT

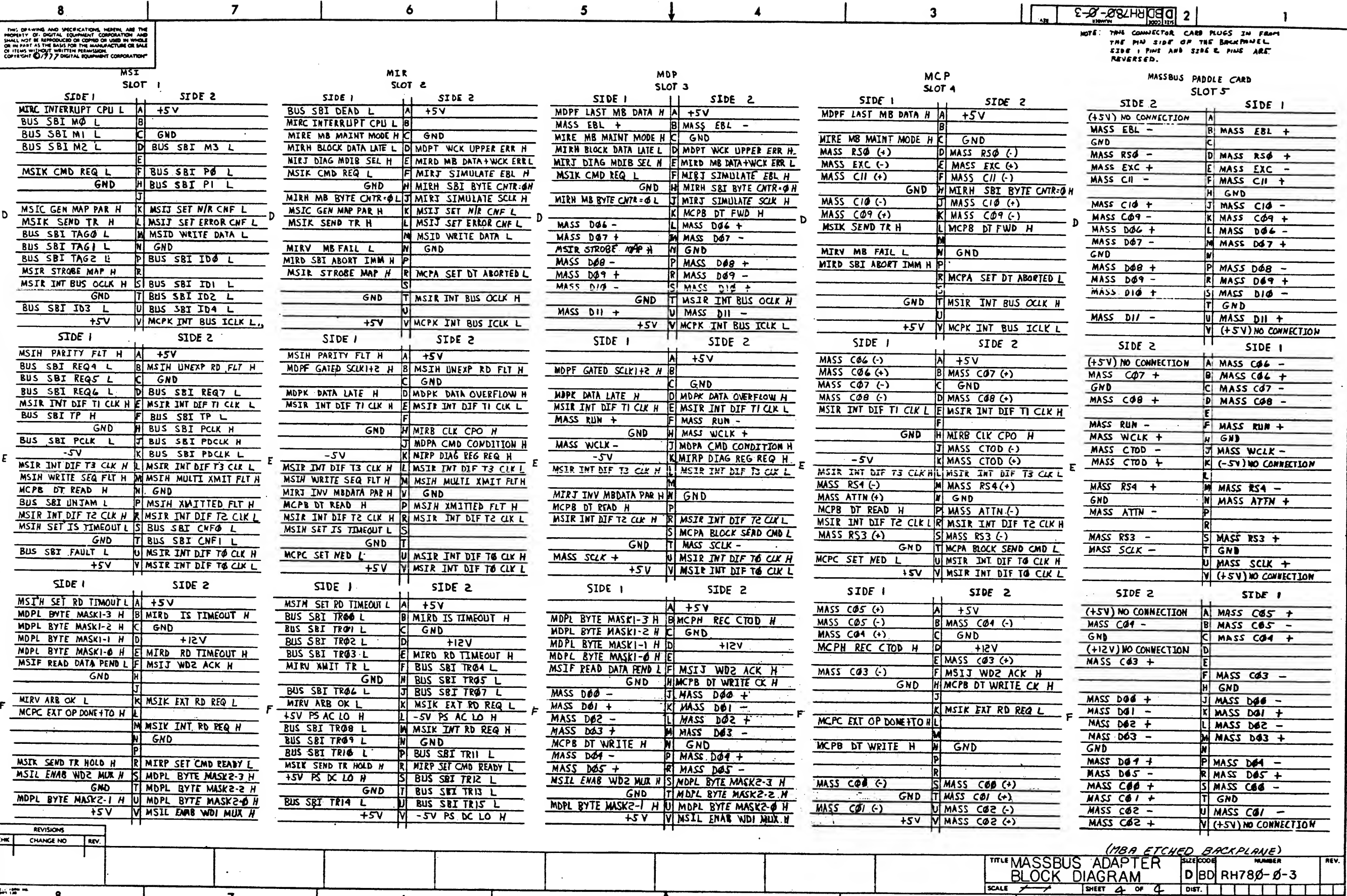


(MBA INTERNAL REG. & MAP BIT ASSIGNMENTS)



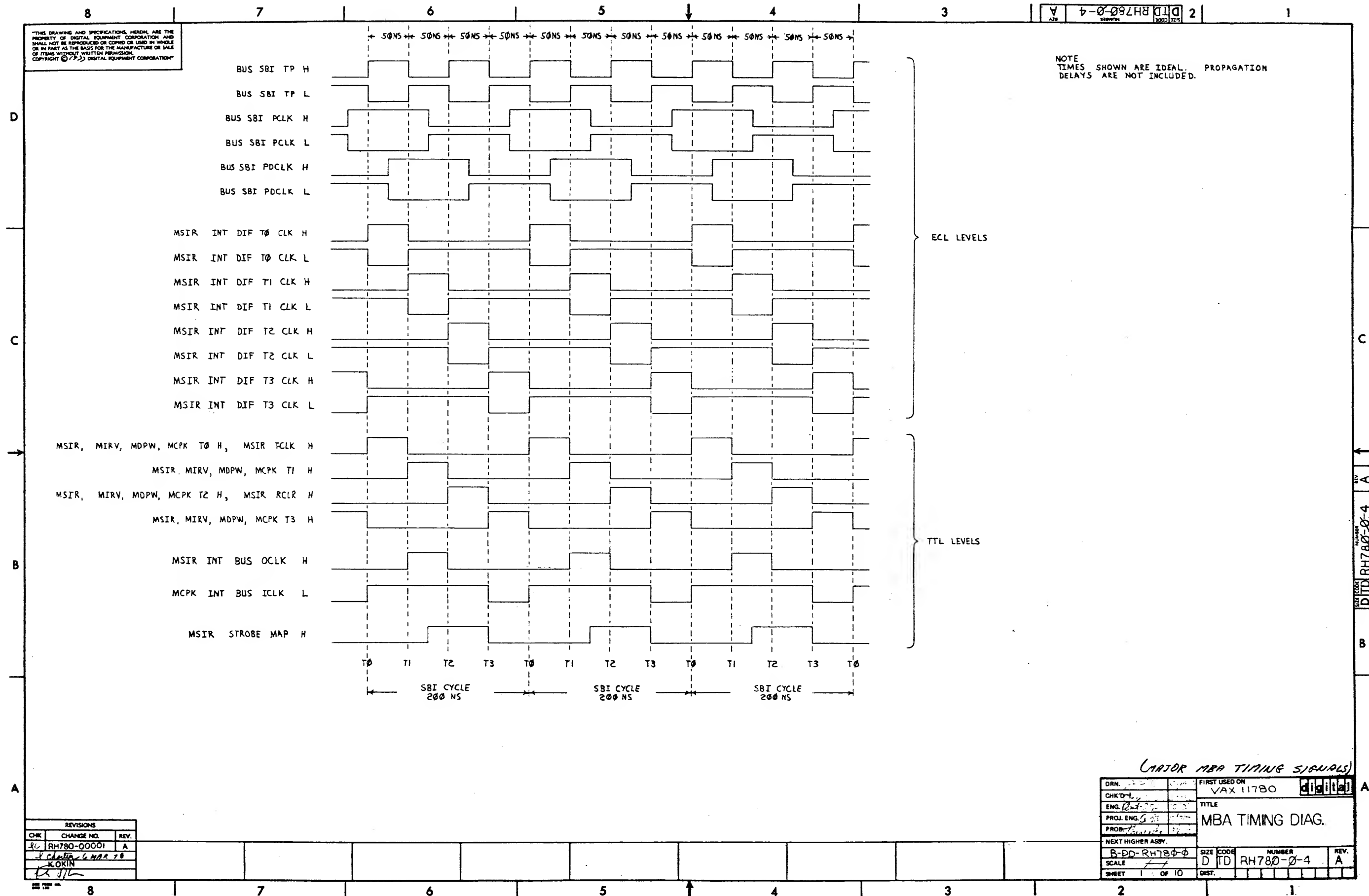






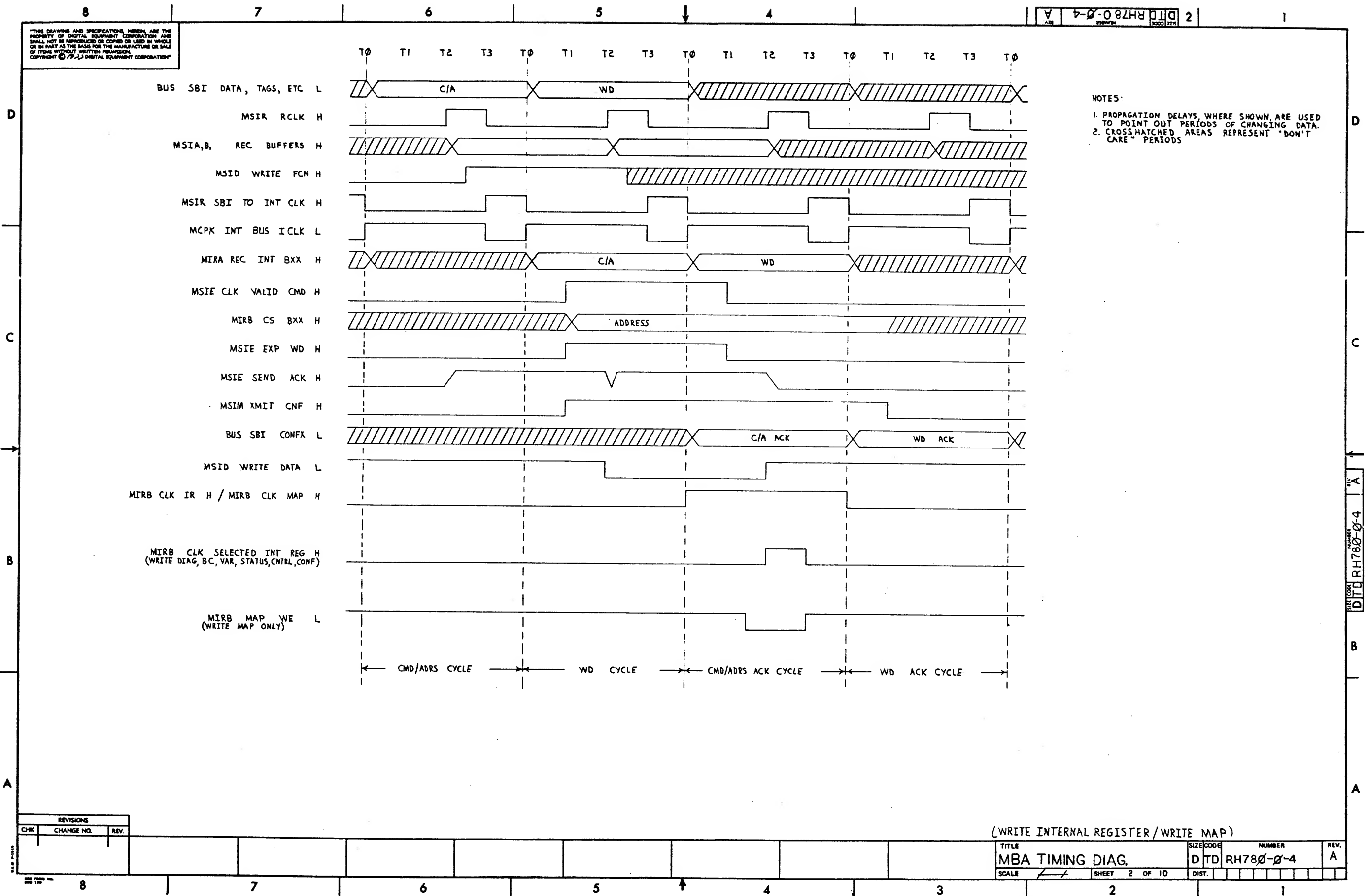
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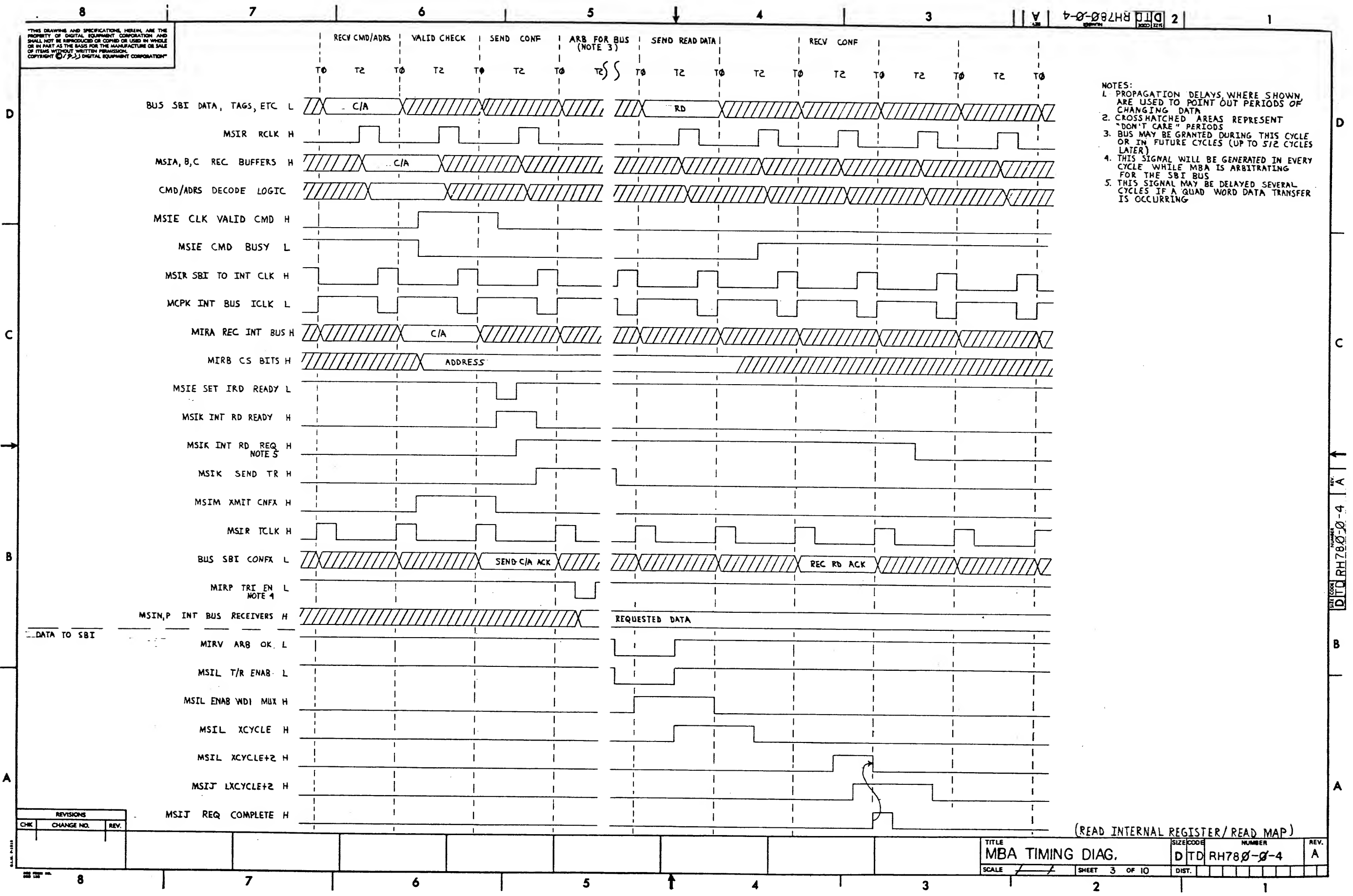
NOTE  
TIMES SHOWN ARE IDEAL. PROPAGATION  
DELAYS ARE NOT INCLUDED.



LABOR MBA TIMING SIGNALS

DRN.	CHK'D	ENG.	PROJ. ENG.	PROB.	NEXT HIGHER ASSY.	SIZE	CODE	NUMBER	REV.
						B-DD-RH780-0	D	RH780-0-4	A
TITLE						MBA TIMING DIAG.			
SHEET						OF 10			





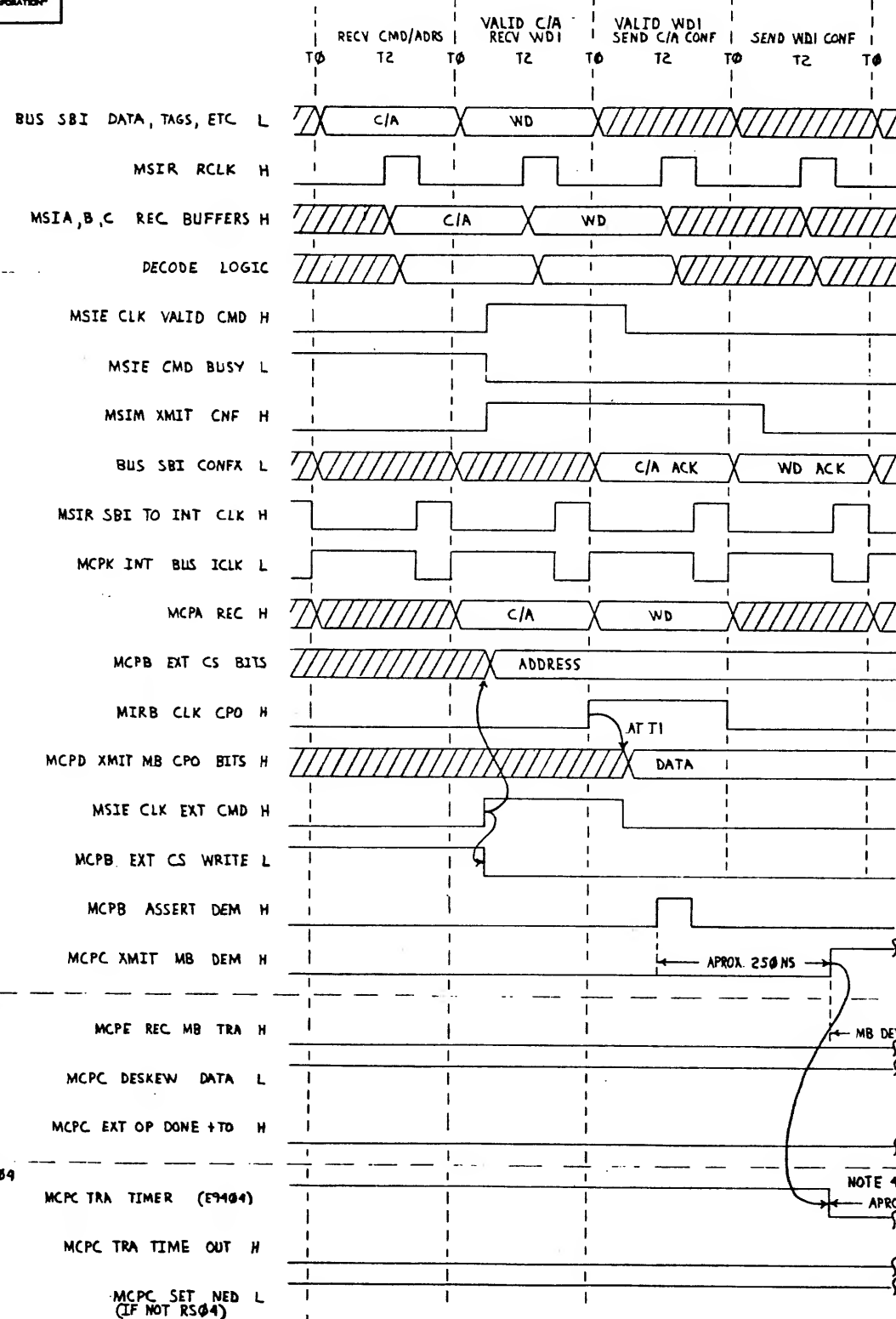
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D

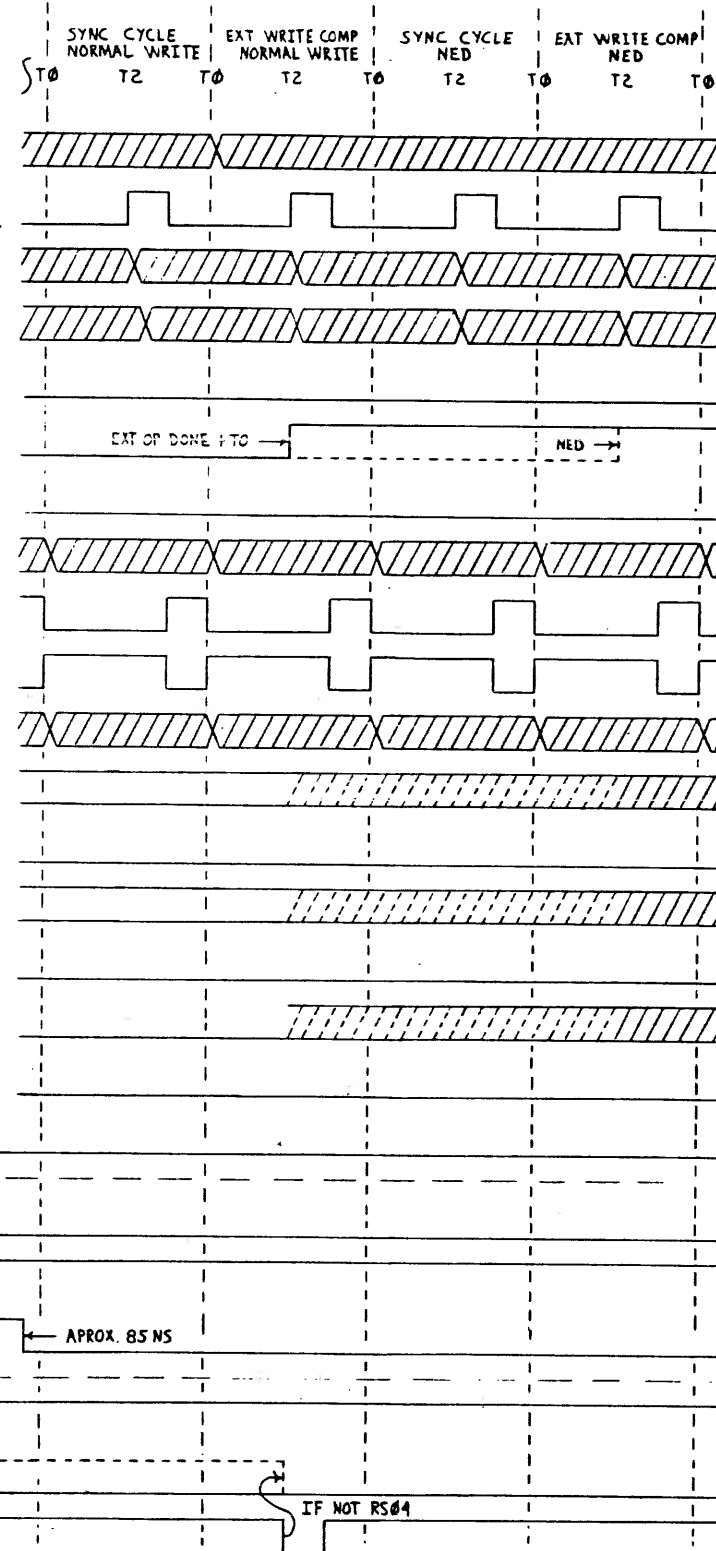
C

B

A



- NOTES:
1. PROPAGATION DELAYS, WHERE SHOWN, ARE USED TO POINT OUT PERIODS OF CHANGING DATA.
  2. CROSSHATCHED AREAS REPRESENT "DON'T CARE" PERIODS.
  3. BROKEN CROSSHATCHED AREAS REPRESENT VALID DATA UNTIL DEASSERTION OF CMD BUSY.
  4. MCPC TRA TIMER WILL BE CLEARED BY REC MB TRA FOR NORMAL EXT REG WRITES (EXCEPT ATTENTION SUMMARY REG - RS04) BEFORE IT TIMES OUT OR NED ERROR OCCURS.



TIMING ASYNCHRONOUS TO SBI TIMING

MB DEVICE DEPENDENT

APPROX. 250 NS

APPROX. 85 NS

NOTE 4

APPROX. 1.5 μS

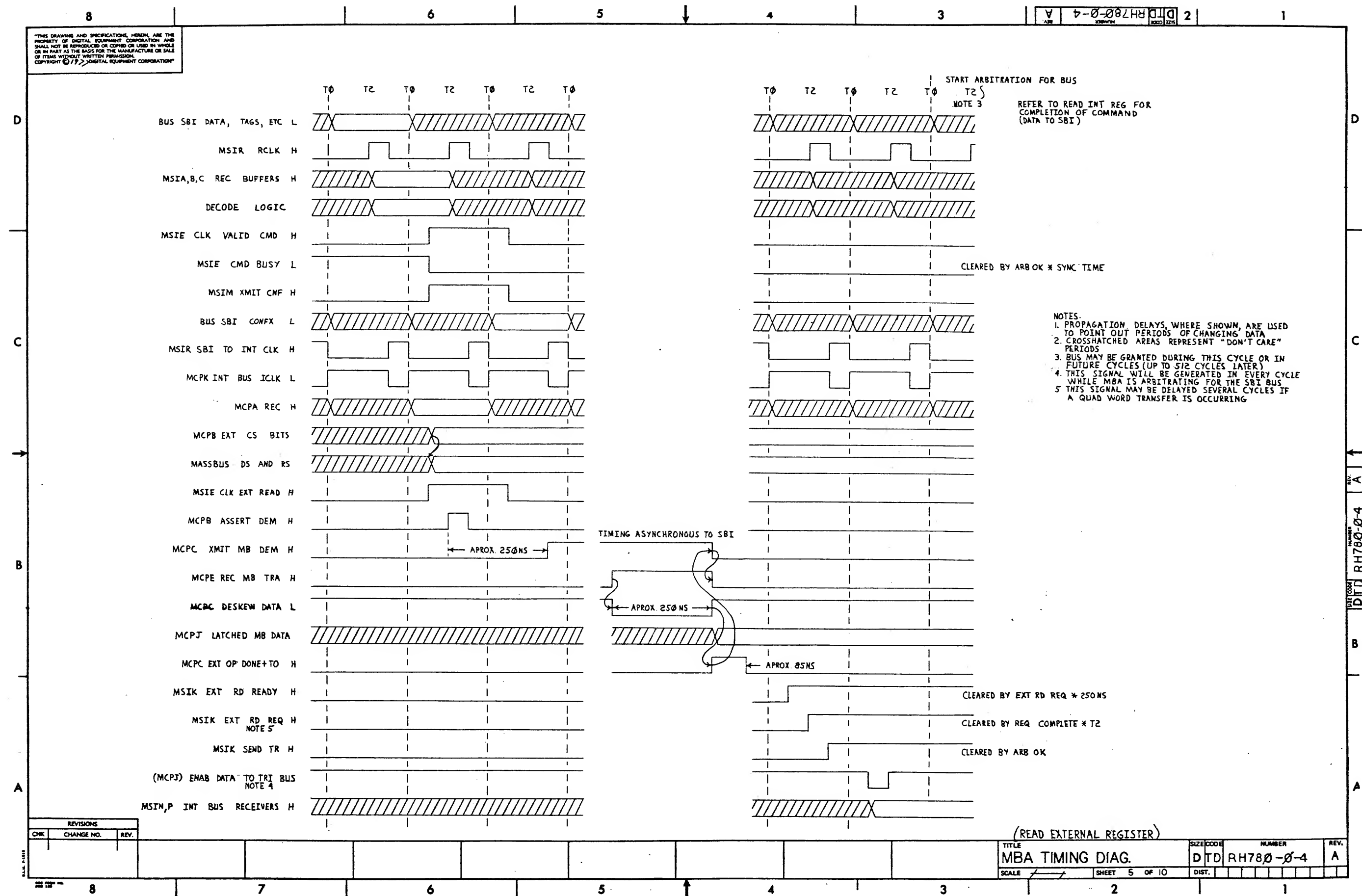
IF RS04

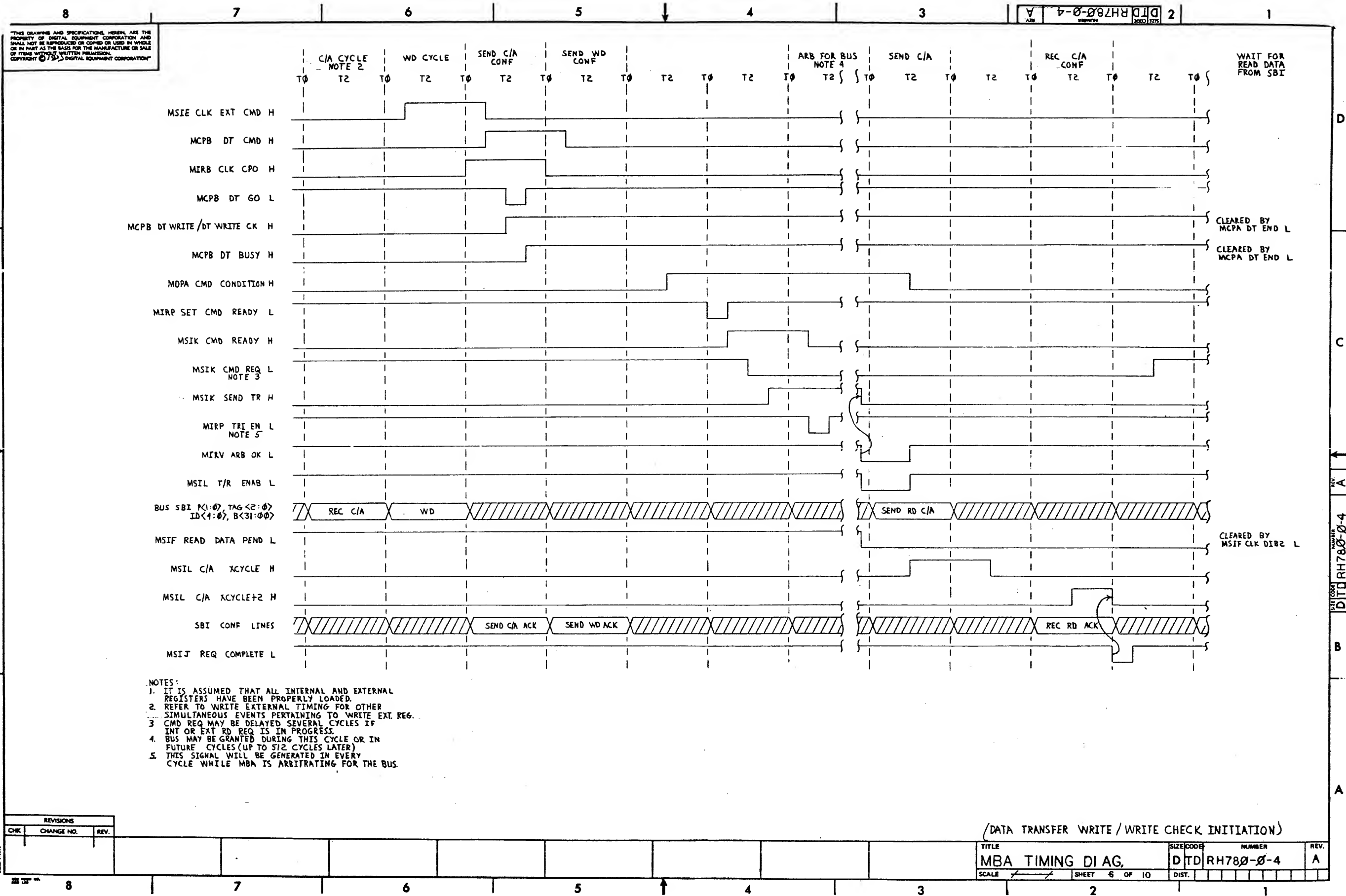
IF NOT RS04

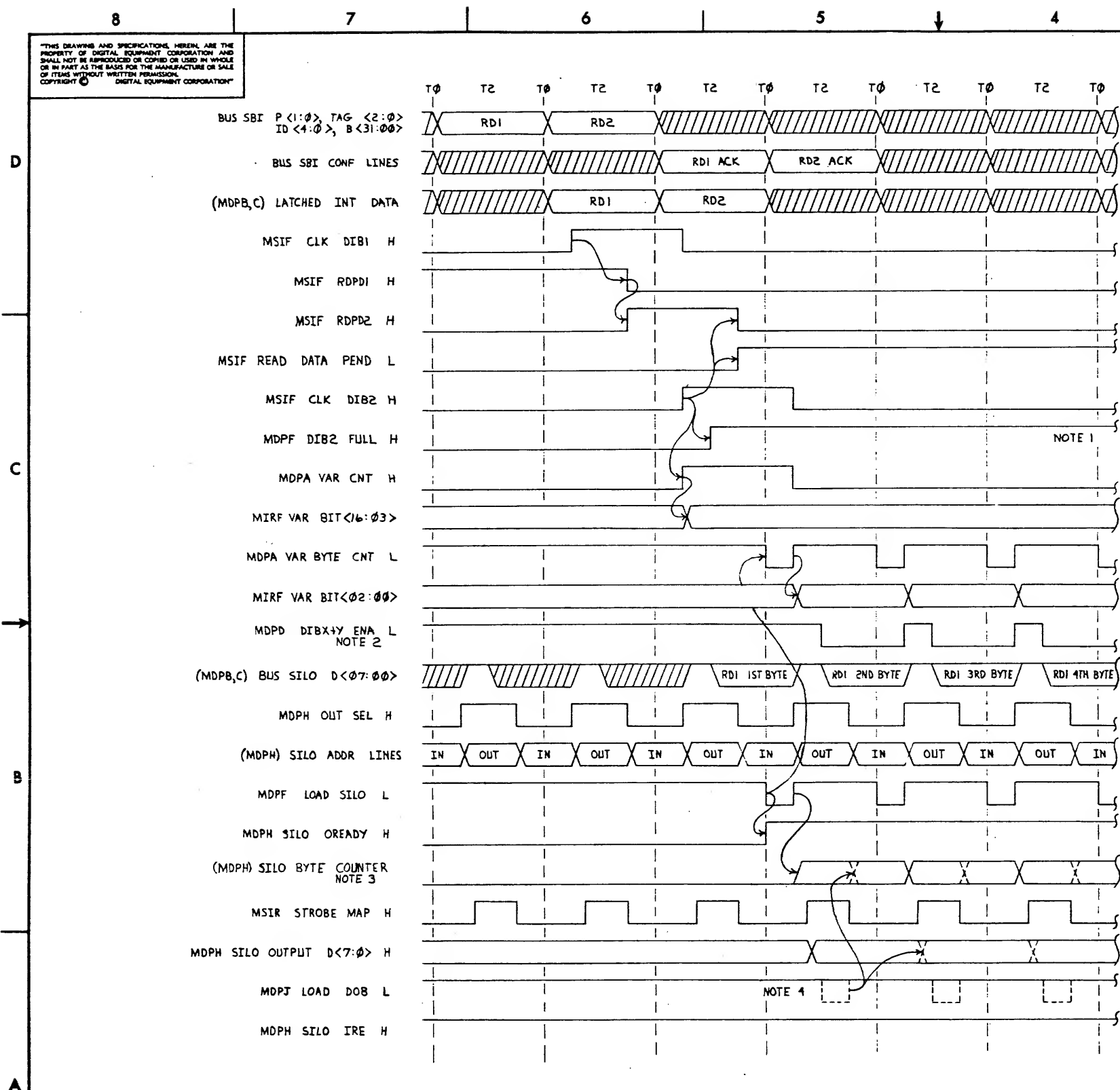
(WRITE EXT REG / WRITE RS04 / NED)

REVISIONS		
CHK	CHANGE NO.	REV.

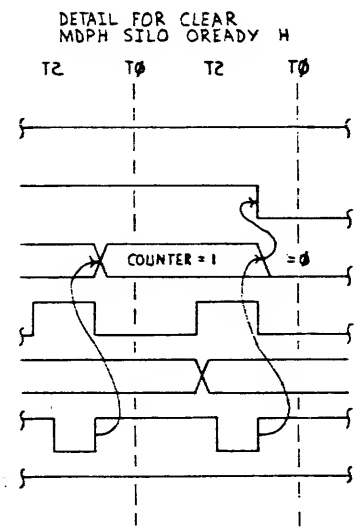
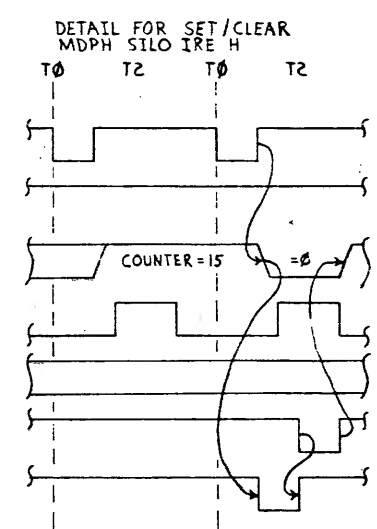
TITLE		SIZE CODE		NUMBER		REV
MBA TIMING DIAG.		D	TD	RH780-0-4		A
SCALE	SHEET 4 OF 10		DIST			







- NOTES:
1. DIB2 FULL IS CLEARED ON THE LOAD SILO PULSE FOLLOWING VAR BIT<2:0> GOING TO 7 (DT FWD) OR 0 (DT REV).
  2. ENABLE SELECTED DIB PER VAR BIT<2:0>.
  3. SIGNAL REPRESENTS THE OR OF ALL 4 COUNTER LINES.
  4. LOAD DOB WILL ONLY BE TRUE WHEN NEXT DOB IS EMPTY. RELATED DASHED ARE ACTIONS DEPENDENT ON THE LOAD DOB SIGNAL.



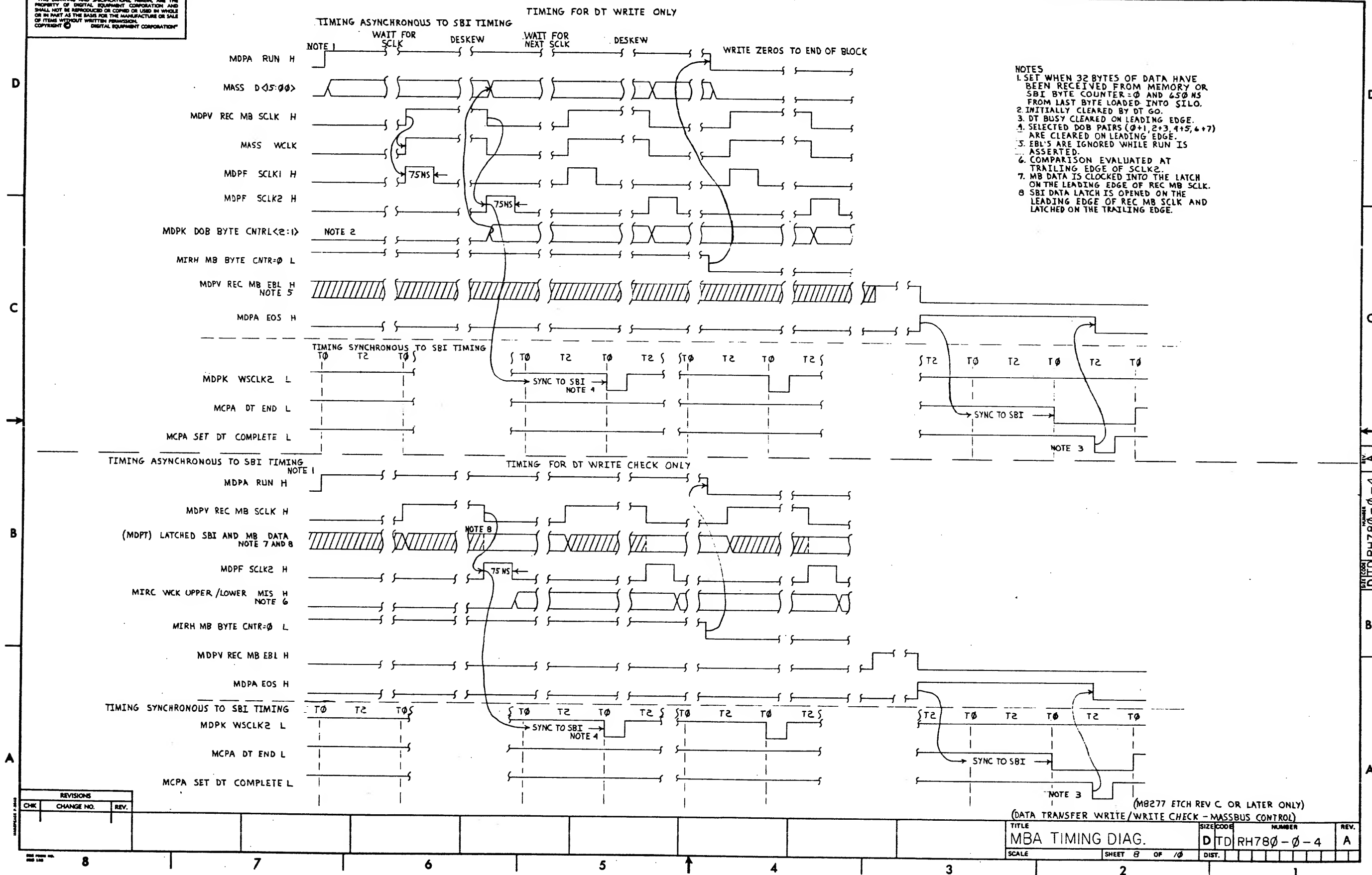
(M8277 ETCH REV C OR LATER)

(DATA TRANSFER WRITE/WRITE CHECK-SILO CONTROL)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE/CODE	NUMBER	REV.
MBA TIMING DIAG.	D	TD RH780-0-4	A
SCALE	SHEET 7 OF 10	DIST.	





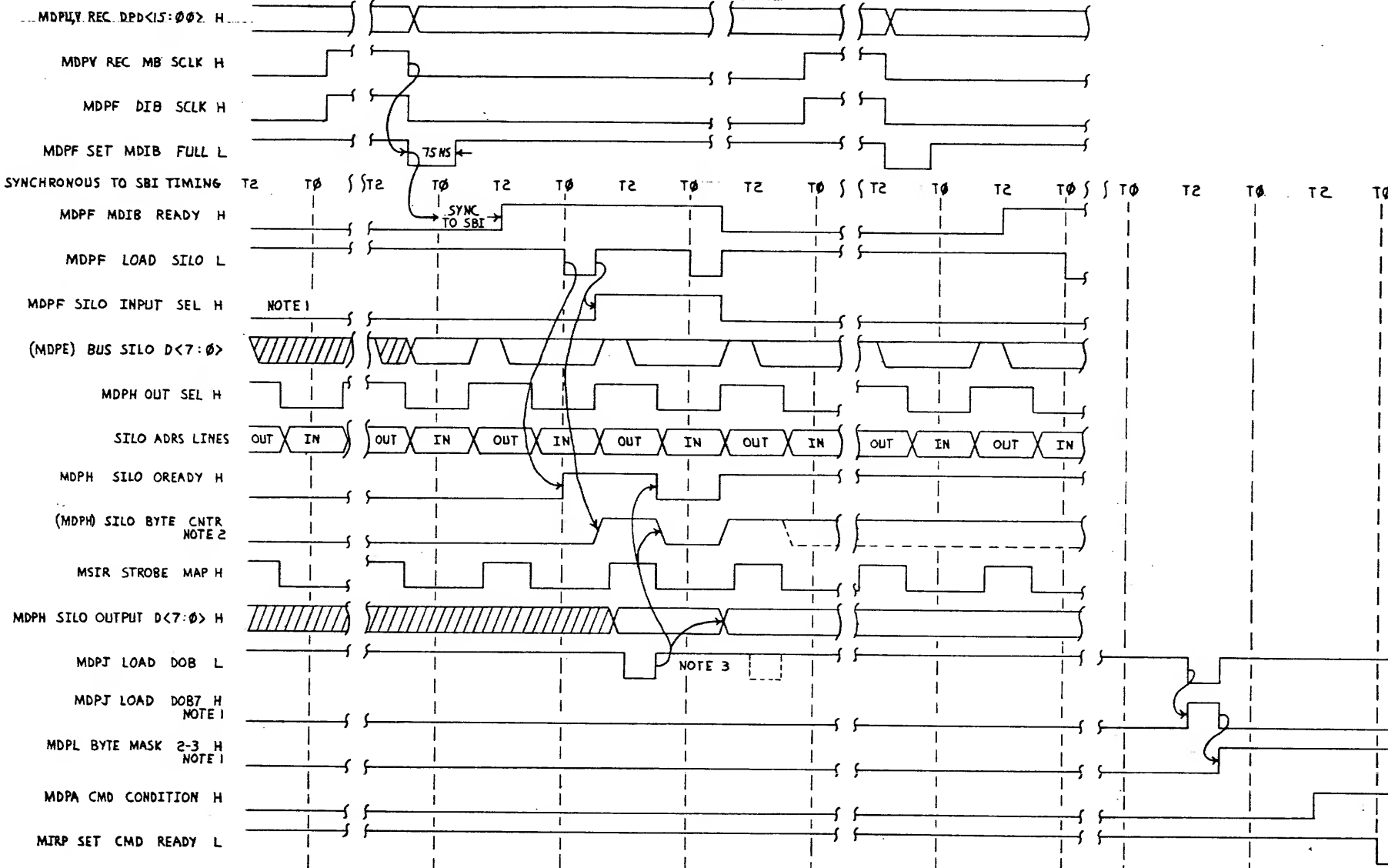
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TIMING ASYNCHRONOUS TO SBI TIMING

WAIT FOR  
NEXT  
SCLK

- NOTES:
1. FOR READ REVERSE, SILO INPUT SEL WILL INITIALLY BE SET HIGH. LOAD DOB0 WILL CAUSE BYTE MASK 1-0 TO BECOME TRUE AND BYTE MASK 1-0 WILL INITIATE CMD CONDITION.
  2. SIGNAL REPRESENTS THE OR OF ALL 4 COUNTER LINES
  3. LOAD DOB WILL ONLY OCCURE WHEN NEXT DOB IS EMPTY

TIMING SYNCHRONOUS TO SBI TIMING



CLEARED BY MSIJ WD2 ACK H

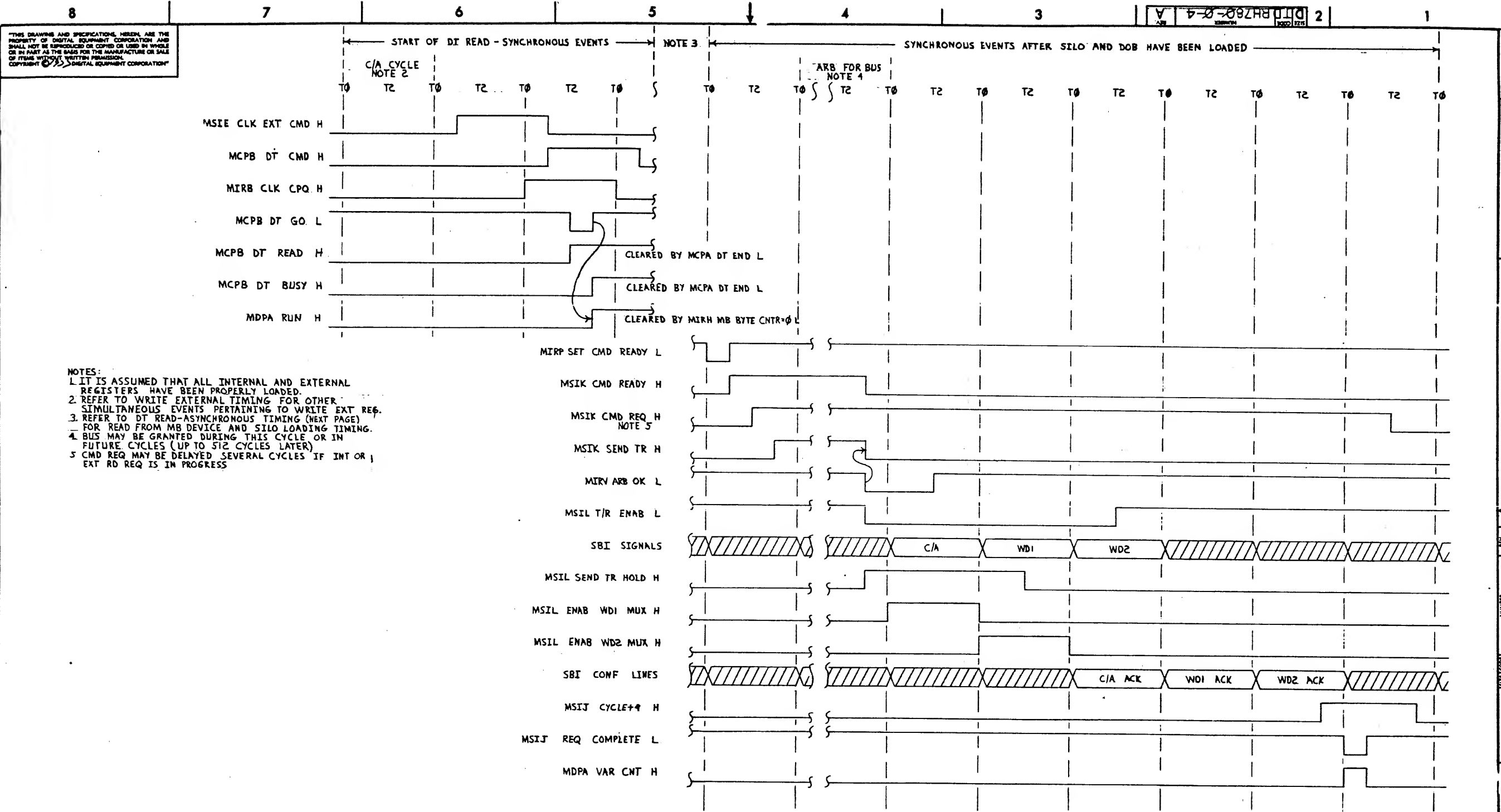
CLEARED AT T0 AFTER MSIK CMD REQ L

REFER BACK TO DT READ-SYNCHRONOUS  
TIMING FOR COMPLETION OF CYCLE

REVISIONS		
CHK	CHANGE NO.	REV.

(M8277 ETCH REV C OR LATER)  
(DATA TRANSFER READ - SILO CONTROL, LOAD DOB)

TITLE		SIZE/COORD	NUMBER	REV.
MBA TIMING DIAG.		DITD	RH780-0-4	A
SCALE		SHEET 7 OF 10	DIST.	

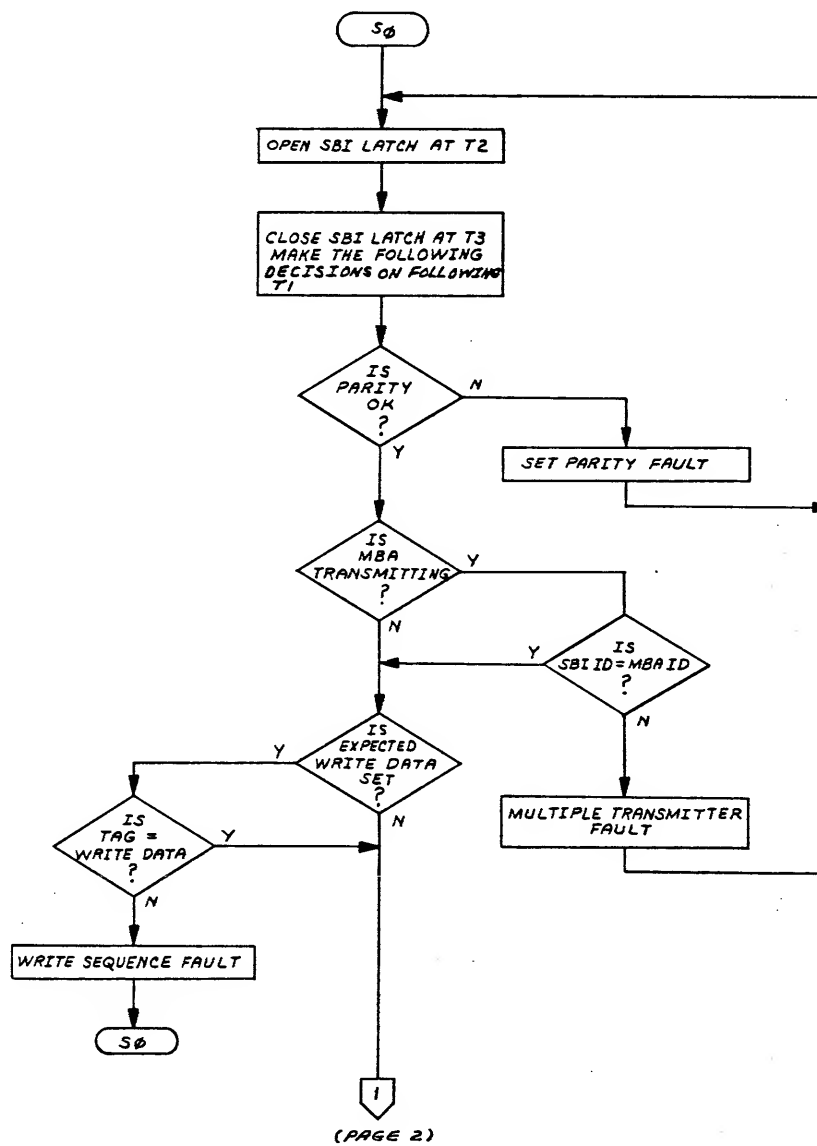


REVISIONS		
CHK	CHANGE NO.	REV.

DATA TRANSFER READ (SBI SYNCHRONOUS TIMING)

TITLE	SIZE CODE	NUMBER	REV.
MBA TIMING DIAG.	DTD	RH780-0-4	A
SCALE	SHEET	10 OF 10	DIST.

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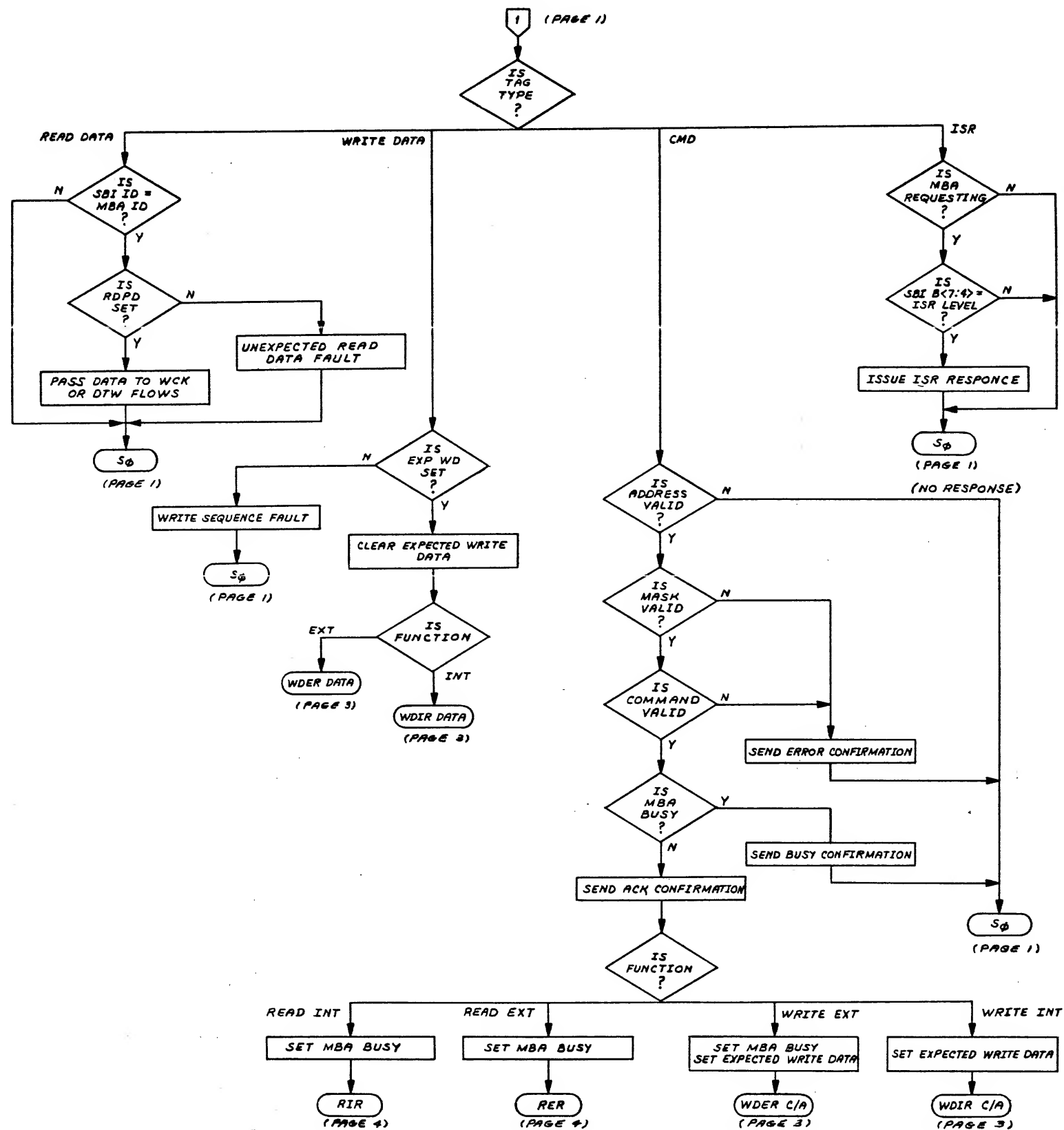
(SBI DECODE & VALID CHECK)

DRN. 11780	5/7/77	FIRST USED ON	VAX 11780	digital
CHK'D. [Signature]	6/1/77	TITLE	MBA FLOW DIAG.	
ENG. [Signature]	8/1/77	PROJ. ENG. [Signature]	10/1/77	
PROD. [Signature]	11/1/77			
NEXT HIGHER ASSY.		SIZE	CODE	NUMBER
B-DD-RH780-0		D	FD	RH780-0-5
SCALE	1 OF 8	DIST.		
SHEET	1 OF 8			

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NOTE:

THERE ARE 2 BUSY FLOPS  
DT BUSY = DATA TRANSFER IN PROGRESS  
MBA BUSY = MBA'S SBI INTERFACE  
IS IN THE MIDDLE OF AN SBI  
OPERATION.



(SBI DECODE AND VALID CHECK)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		SIZE	CODE	NUMBER	REV.
MBA FLOW DIAG.		D	FD	RH780-0-5	
SCALE		1/4"			
SHEET		2	OF	8	
DIST.					

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# WRITE EXTERNAL REG - C/A

WDER C/A (PAGE 2)

CLOCK EXT COMMAND  
REG, DRIVE SEL ← INT BUS

Sφ  
(PAGE 1)

# WRITE EXTERNAL REG - DATA

WDER DATA (PAGE 2)

CLOCK CPO  
DATA BUFFER ← INT BUS

DT  
COMMAND W/  
GO BIT AND  
RS = 0?

ASSERT MASS C<15 00, RS,  
DS, AND CTOD

250NS DESKEW

ASSERT DEM

IS  
RS=04?

TRA  
RECEIVED?

TIMEOUT?

SET NED

250NS DESKEW

DT IN  
PROGRESS?

SET DT BUSY

PARALLEL  
OPERATION

RFD  
READ FROM DEVICE  
(PAGE 8)

WTD  
WRITE TO DEVICE  
(PAGE 5)

WCK  
WRITE CHECK  
(PAGE 5)

TIMEOUT?

NEGATE DEM  
CLEAR MBA BUSY

Sφ  
(PAGE 1)

SET PGE, CLEAR MBA BUSY

Sφ  
(PAGE 1)

# WRITE INTERNAL REG - C/A

WDIR C/A (PAGE 2)

CLOCK VALID COMMAND  
CONTROL STORE ← INT BUS

Sφ  
(PAGE 1)

# WRITE INTERNAL REG - DATA

WDIR DATA (PAGE 2)

DATA BUFFER ← INT BUS

IS  
DT BUSY?

WRITE DATA TO REG

Sφ  
(PAGE 1)

IS  
WRITE  
ALLOWED TO  
THIS  
REGISTER?

SET PGE

(WRITE EXTERNAL/WRITE INTERNAL REGISTER)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		SIZE CODE	NUMBER	REV.
MBA FLOW DIAG		DFD	RH780-0-5	
SCALE	SHEET 3 OF 8	DIST.		

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# READ EXTERNAL REG

RER (PAGE 2)

CLOCK EXT COMMAND  
REG, DRIVE SEL ← INT BUS

NEGATE CTOD, ASSERT  
RS AND DS

250 NS DESKEW

ASSERT DEM

IS  
RS = 04 ?

TRA  
RECEIVED ?

TIMEOUT ?

250 NS DESKEW

STROBE DATA INTO REG

IS  
PARITY  
OK ?

SET MCPE

CLEAR DATA REGISTER

NEGATE DEM  
SET EXTERNAL READ READY

IS  
ANOTHER  
REQUEST IN  
PROGRESS ?

ASSERT DATA ON INTERNAL  
TRI-STATE BUS (T1-T2)

(A)

# READ INTERNAL REG

RIR (PAGE 2)

CLOCK VALID COMMAND  
SELECT REGISTER OR MAP

SET INTERNAL READ READY

IS  
ANOTHER  
REQUEST IN  
PROGRESS ?

ASSERT DATA ON INTERNAL  
TRI-STATE BUS (T1-T2)

(A)

ARBITRATE FOR SBI BUS

SBI  
GRANTED ?

GATE DATA ONTO SBI BUS

TIMEOUT ?

SET IS TIMEOUT

CLEAR MBA BUSY

S0

(PAGE 1)

(READ EXTERNAL / READ INTERNAL REGISTER)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE CODE	NUMBER	REV.
MBA FLOW DIAG.	DFD	RH780-0-5	
SCALE	SHEET	4 OF 8	DIST.

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WRITE TO DEVICE OR WRITE CHECK

WTD (PAGE 3)

WCK (PAGE 3)

INIT SILO INPUT CTR  
CLEAR DIB2 FULL  
CLEAR SILO  
INIT SILO OUTPUT CONTROL  
INIT MASSBUS DATA CNTRL

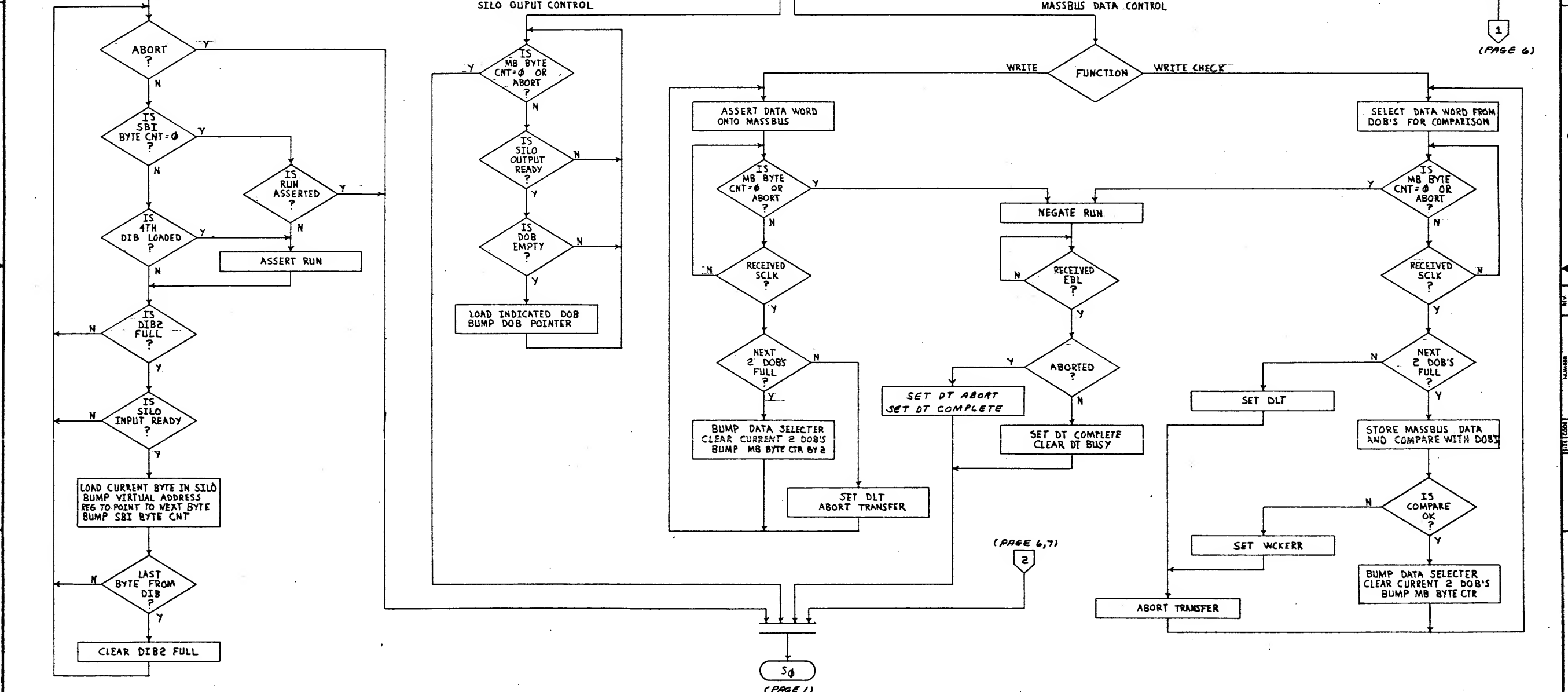
PARALLEL OPERATIONS

SILO INPUT CONTROL

SILO OUTPUT CONTROL

MASSBUS DATA CONTROL

SBI CONTROL



50 (PAGE 1)

(PAGE 6,7)

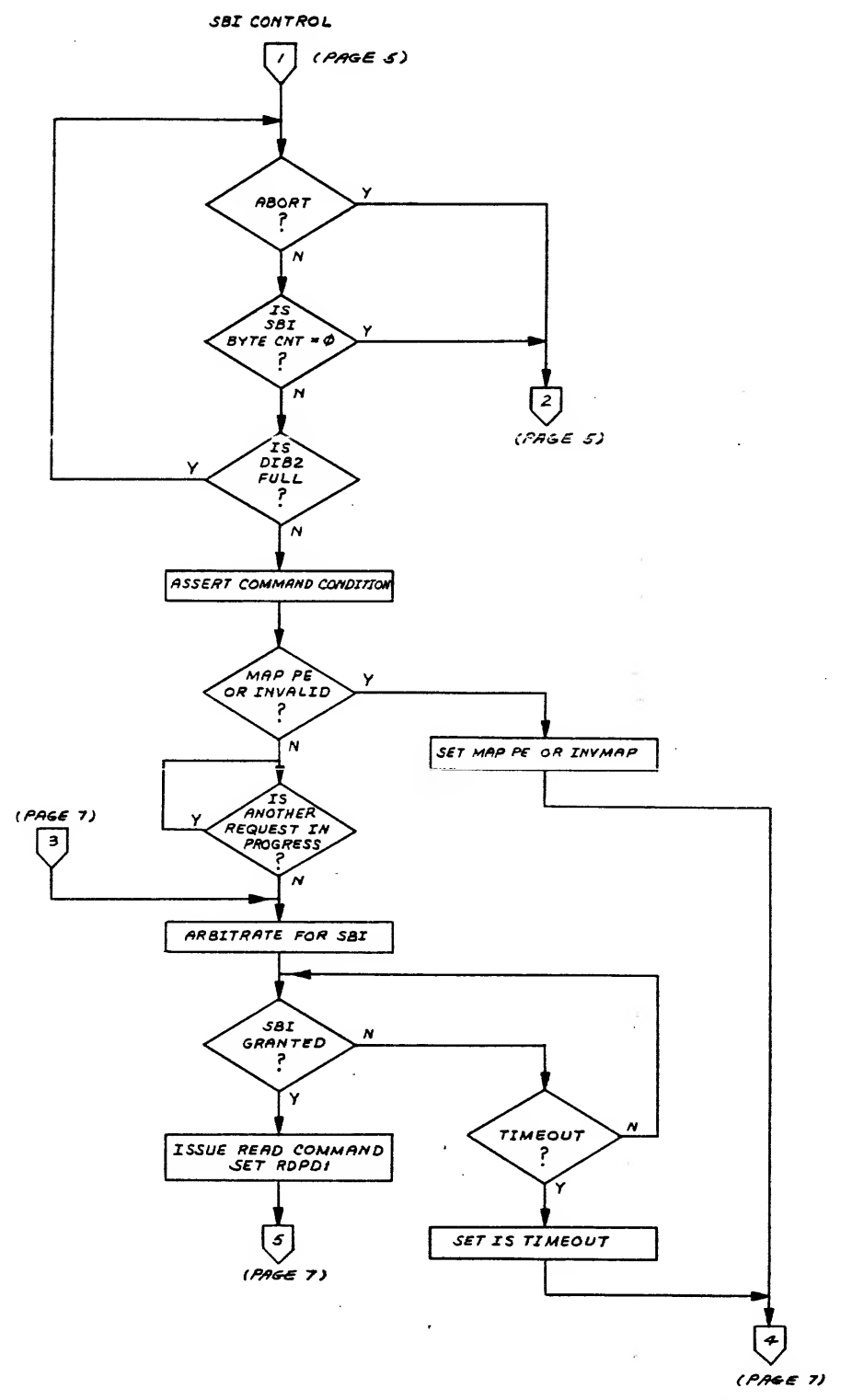
REVISIONS		
CHK	CHANGE NO.	REV.

(WRITE TO DEVICE/WRITE CHECK)

TITLE	SIZE/CODE	NUMBER	REV.
MBA FLOW DIAG.	DFD RH780-0-5		
SCALE	SHEET 5 OF 8	DIST.	



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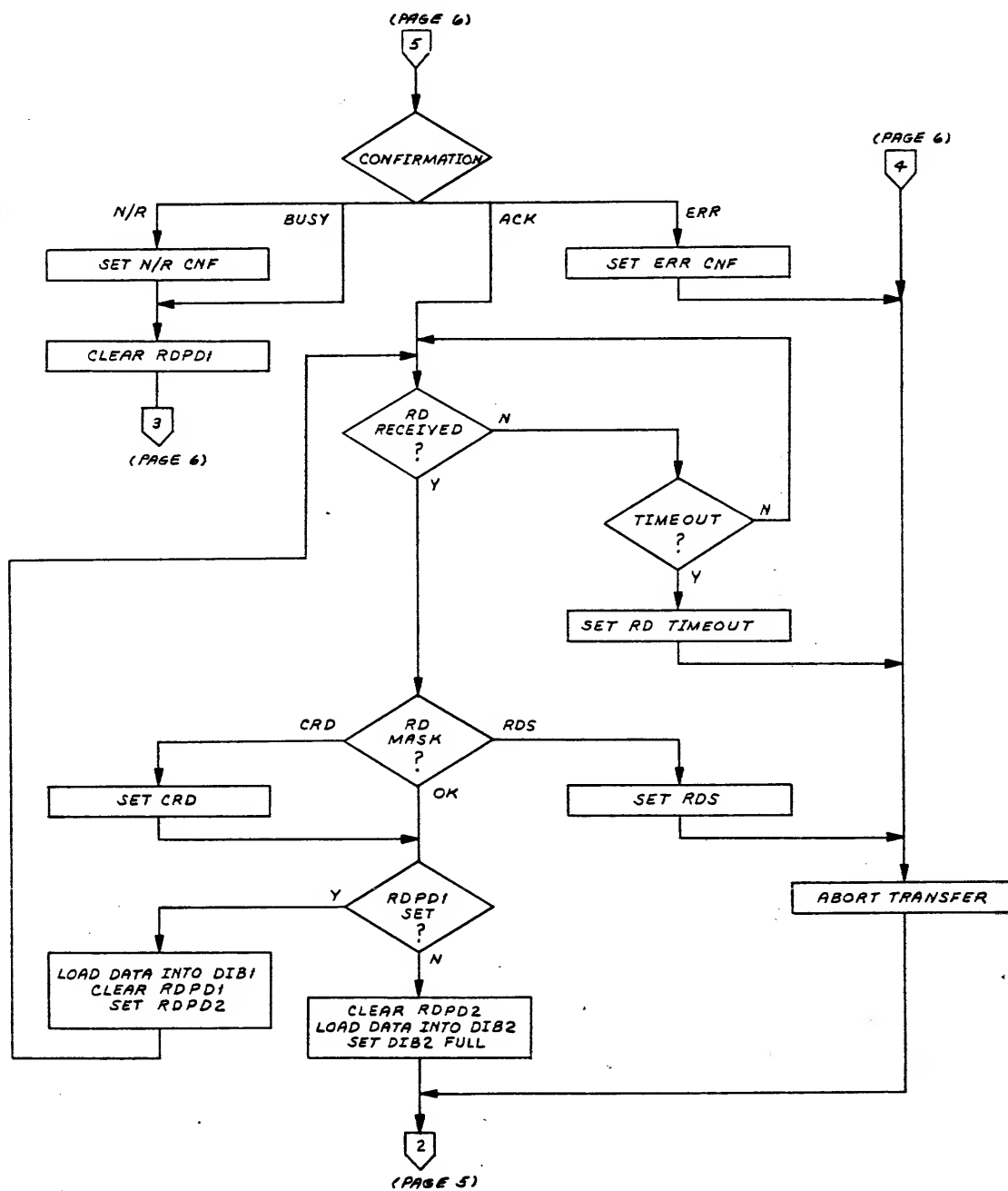


(WRITE TO DEVICE/WRITE CHECK (SBI CONTROL))

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		SIZE CODE	NUMBER	REV.
MBA FLOW DIAG.		D/FD	RH780-0-5	
SCALE	SHEET	6 OF 8	DIST.	

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(WRITE TO DEVICE/WRITE CHECK (SBI CONTROL))

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		SIZE CODE	NUMBER	REV.
MBA FLOW DIAG.		D	FD RH780-0-5	
SCALE		SHEET	7 OF 8	DIST.

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READ FROM DEVICE  
(DT READ FWD OR REV)  
RFD (PAGE 3)

INITIALIZE SILO  
ASSERT RUN  
INITIALIZE MDIB SEL  
INITIALIZE DOB LOAD CNTL

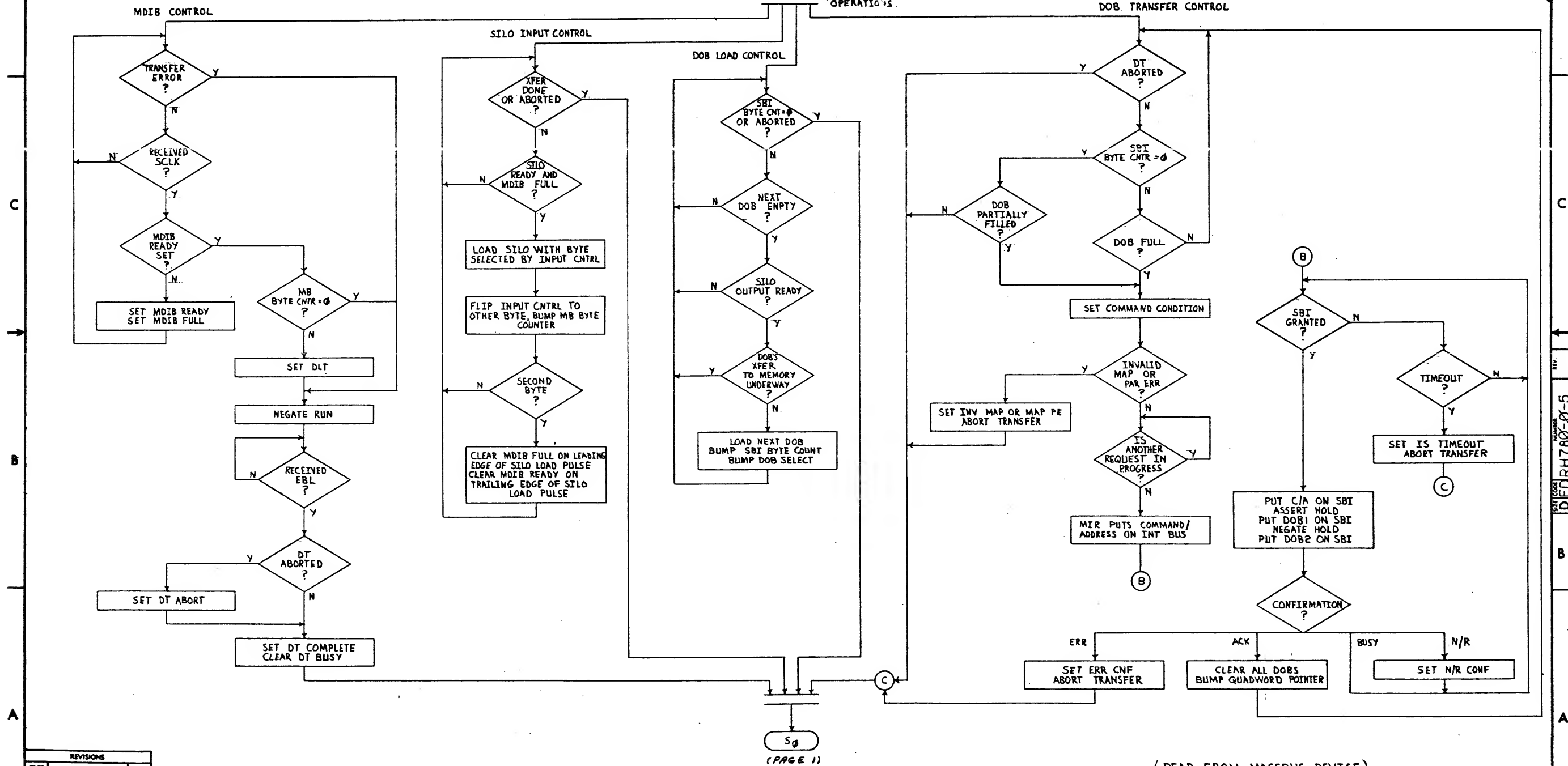
PARALLEL  
OPERATIONS

MDIB CONTROL

SILO INPUT CONTROL

DOB LOAD CONTROL

DOB TRANSFER CONTROL

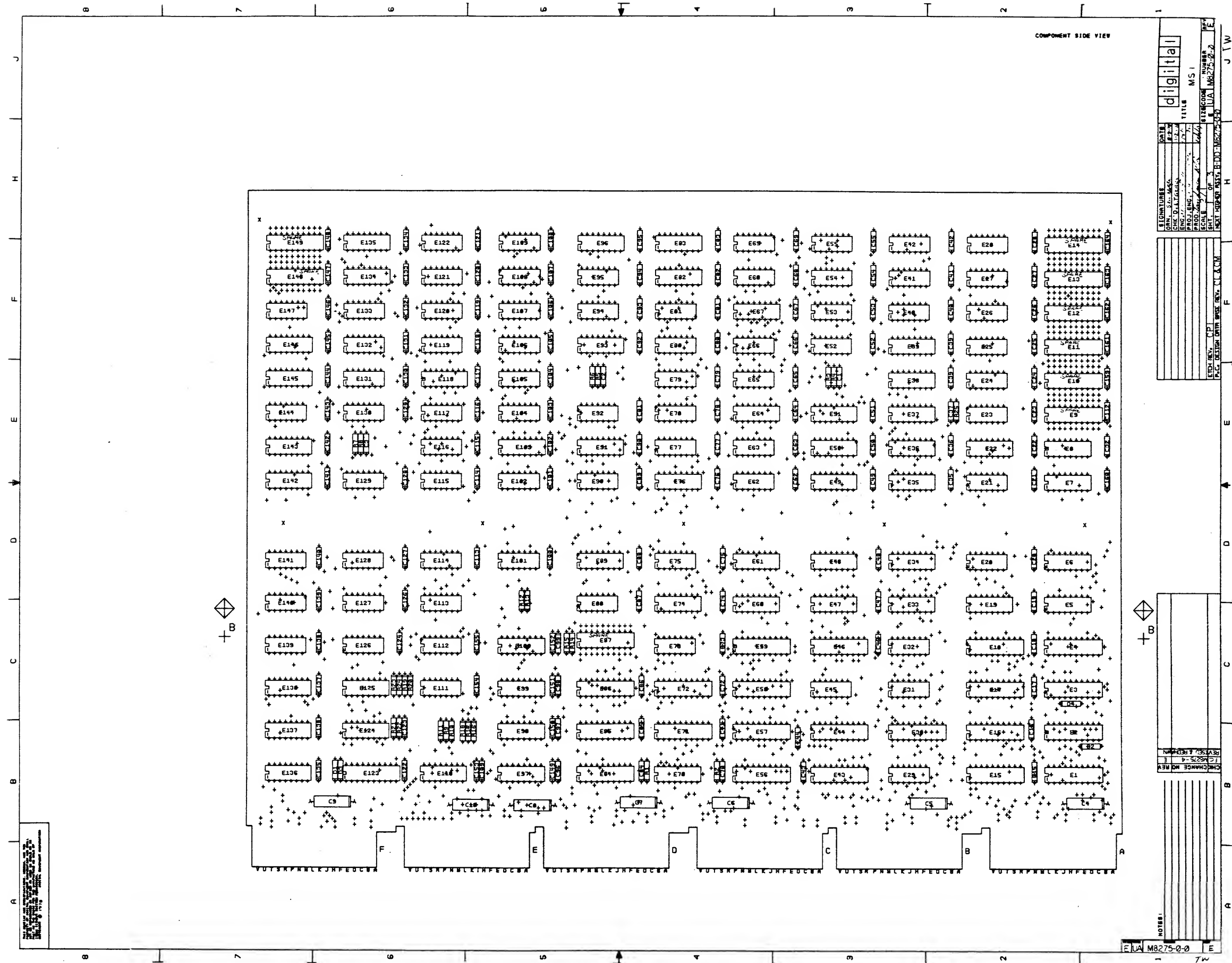


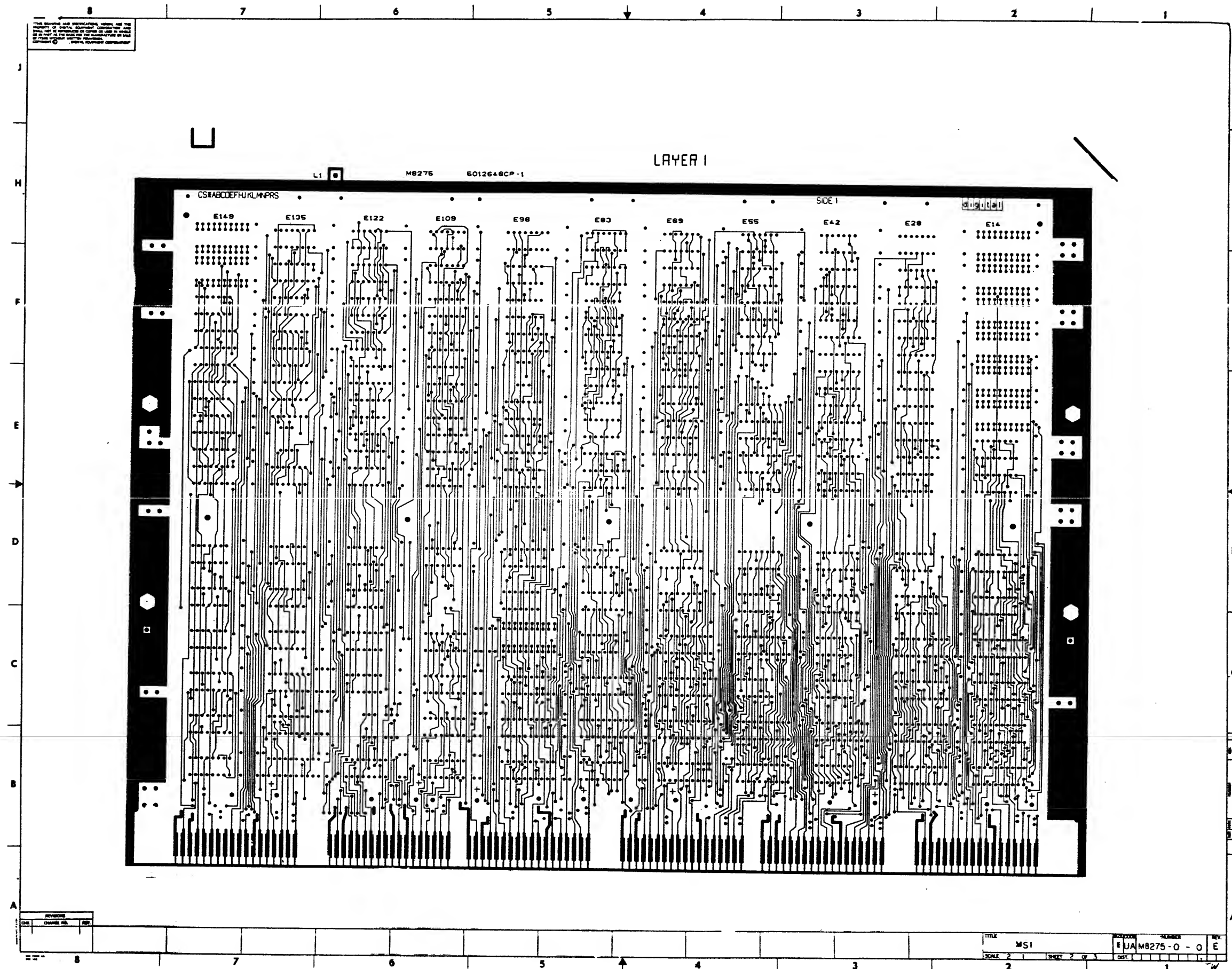
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(PAGE 1)

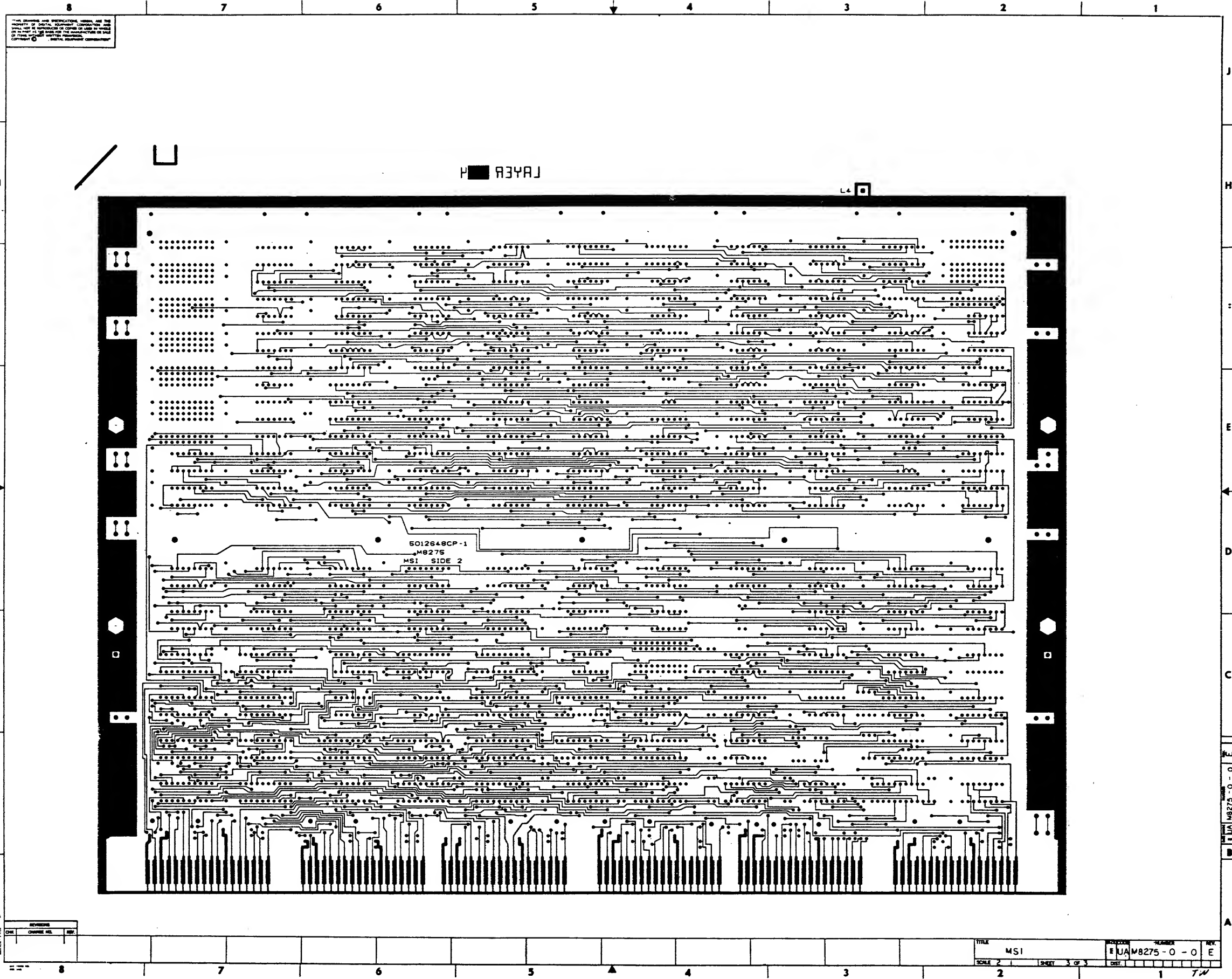
(READ FROM MASSBUS DEVICE)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE CODE	NUMBER	REV.
MBA FLOW DIAG.	DFD	RH780-Q-5	
SCALE	SHEET 8 OF 8	DIST.	







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REVISIONS  
ONE CHANGE NO. 1

TITLE  
MSI  
SCALE 2  
SHEET 3 OF 3  
NUMBER  
EUA M8275-0-0  
REV.  
E

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	E-MD-5012648-0-0	5012648-00	M8275	1
2	2		1012084-01	8 MFD 25V G% 30D AL EL	7
3	3		1012784-00	.047 MFD 50V -20+80 CER	135
4	4		1103041-00	DEC 777 QS=12PCB PIV= 8VS	4
5	5		1300295-00	330 1/4W 5% CC	19
6	6		1300365-00	1 K 1/4W 5% CC	2
7	7		1301424-00	680 1/4W 5% CC	3
8	8		1910532-00	74S00 NAND GATE-QUAD 2IN	7
9	9		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	1
10	10		1910534-00	74S04 INVERTER GATE-HEX 1I	7
11	11		1912389-00	74S08 AND GATE-QUAD 2IN,PO	9
12	12		1910536-00	74S10 NAND GATE-TRIPLE 3IN	4
13	13		1910537-00	74S11 AND GATE-TRIPLE 3INP	9
14	14		1910539-00	74S20 NAND GATE-DUAL 4INPU	2
15	15		1912813-00	LS27 NOR GATE-TRIPLE 3IN	3
16	16		1910542-00	74S64 A-O-I GATE 4-2-3-2	9
17	17		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	8
18	18		1912803-00	LS04 INVERTER GATE-HEX 1I	1
19	19		1912089-00	74S85 CMPRTR-4BIT MAGNITUD	4
20	20		1910545-00	74S112 FF-JK DUAL,EDGE TRIG	4
21	21		1911983-00	74S133 NAND GATE-POSITIVE 1	1
22	22		1911675-00	74S138 DECODER/DEMUX 3-8 LIN	3
23	23		1910546-00	74S140 NAND GATE-DUAL 4INPU	3
24	24		1910548-00	74S157 MUX 1 OF 2 (QUAD)	8

CONT  
CONT

CONT

CONT

CONT

CONT

REVISION HISTORY			BASIC PART NO: M8275		DRN: L.REYNOLDS		DATE: 12-JUL-79		D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A		CHK'D: F.SMART		DATE: 12-JUL-79		TITLE PARTS LIST	
---	INITIAL	D	SECTION VARIATION INDEX		CHK'D: F.SMART		DATE: 12-JUL-79		MSI	
IKD	TW003	D	[A] 00							
BS	TW004	E	[B]							
BS	TW004	E	[C]		DES.ENG: K.OKIN		DATE: 12-JUL-79			
BS	TW004	E	[D]							
			[E]							
			[F]		RESP.ENG.: K.OKIN		DATE: 12-JUL-79		DOCUMENT NUMBER	
			[H]							
			[J]						SIZE CODE NUMBER REV	
			[K]		MFG.ENG.: M.TERILLO		DATE: 12-JUL-79		K PL M8275-0-DBP E	
			[L]							
			[M]		ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:	
			[N]		E-UA-M8275-0-0				Z0624E.PLS	
									EDIT #	
									6	

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AUTOMATED BY PRTLST.3L(32)

## P A R T S   L I S T

SHEET A2 OF A2

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
25	25	1910957-00	74S175 FF-D QUAD COMMON CLO	5	E89,E93,E103,E135,E143
26	26	1912824-00	LS74 FF-D DUAL,EDGE TRIGG	1	E95
27	27	1912847-00	LS157 MUX 1 OF 2(QUAD)	2	E136,E137
28	28	1910550-00	74S174 FF-D HEX	2	E64,E91
29	29	1912697-00	LS174 FF-D HEX W/CLEAR	1	E50
30	30	1912854-00	LS193 COUNTER,SYNCHR,4BIT,	2	E82,E83
31	31	1912855-00	LS195 SHIFT REG.,4BIT PARA	3	E96,E134,E146
32	32	1913493-00	74S241 OCTAL BUFFER,TRI-STA	4	E3,E17,E44,E57
33	33	1912860-00	LS259 LATCH 8BIT	3	E7,E36,E70
34	34	1911573-00	74S280 PARITY GEN/CHKR,9BIT	5	E29,E31,E32,E73,E88
35	35	1912867-00	LS298 MUX 1 OF 4,2IN W/S	3	E49,E51,E138
36	36	1913670-00	74S373 LATCH 8BIT TRASP TR	4	E4,E18,E46,E59
37	37	1911398-00	10101 OR/NOR GATE,4-2IN	2	E98,E110
38	38	1911402-00	10105 OR/NOR GATE,2-3-2	1	E124
39	39	1911415-00	10125 ECL TO TTL TRNSLTR	3	E99,E100,E125
40	40	1913220-00	10216 RECEIVER,TRIPLE LINE	1	E97
41	41	1912731-00	DEC 8646A TRANSCEIVER,4BIT BUS	14	E1,E2,E15,E16,E30,E43,E56,E58, E71,E72,E84,E85,E86,E123
42	42	1912865-00	LS283 ADDER-4BIT BINARY FU	1	E8
43	43	1210711-02	HANDLE,MODULE,HEX	1	
44	44	9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
45	45	1300229-00	100 1/4W 5% CC	1	R25
46	46	9105740-55	*** THIS ITEM IS NOT USED ***	-	

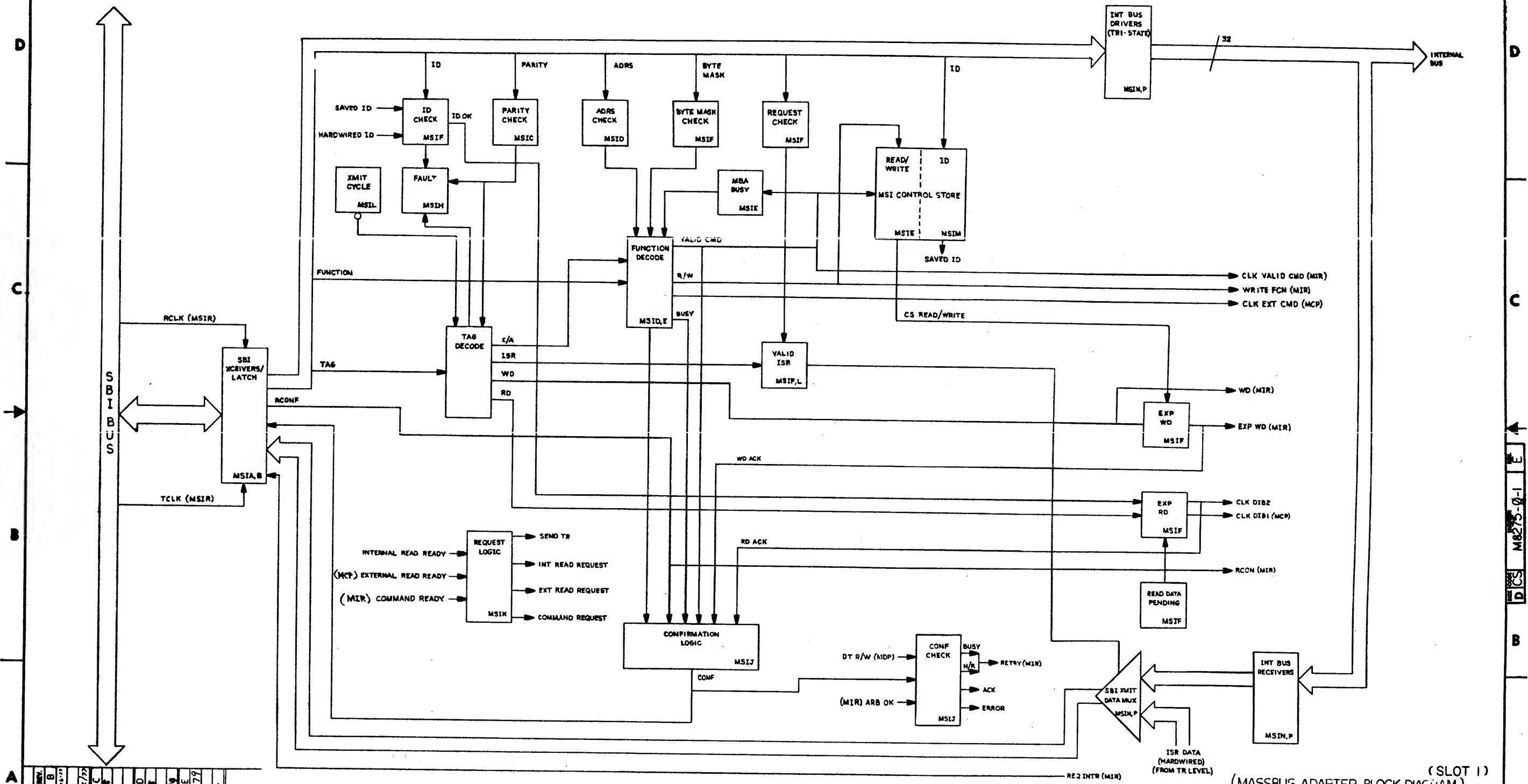
O NOTE: E9-E14,E87,E148,E149 ARE SPARE I.C.S.

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							MSI		K	PL	M8275-0-DBP	E



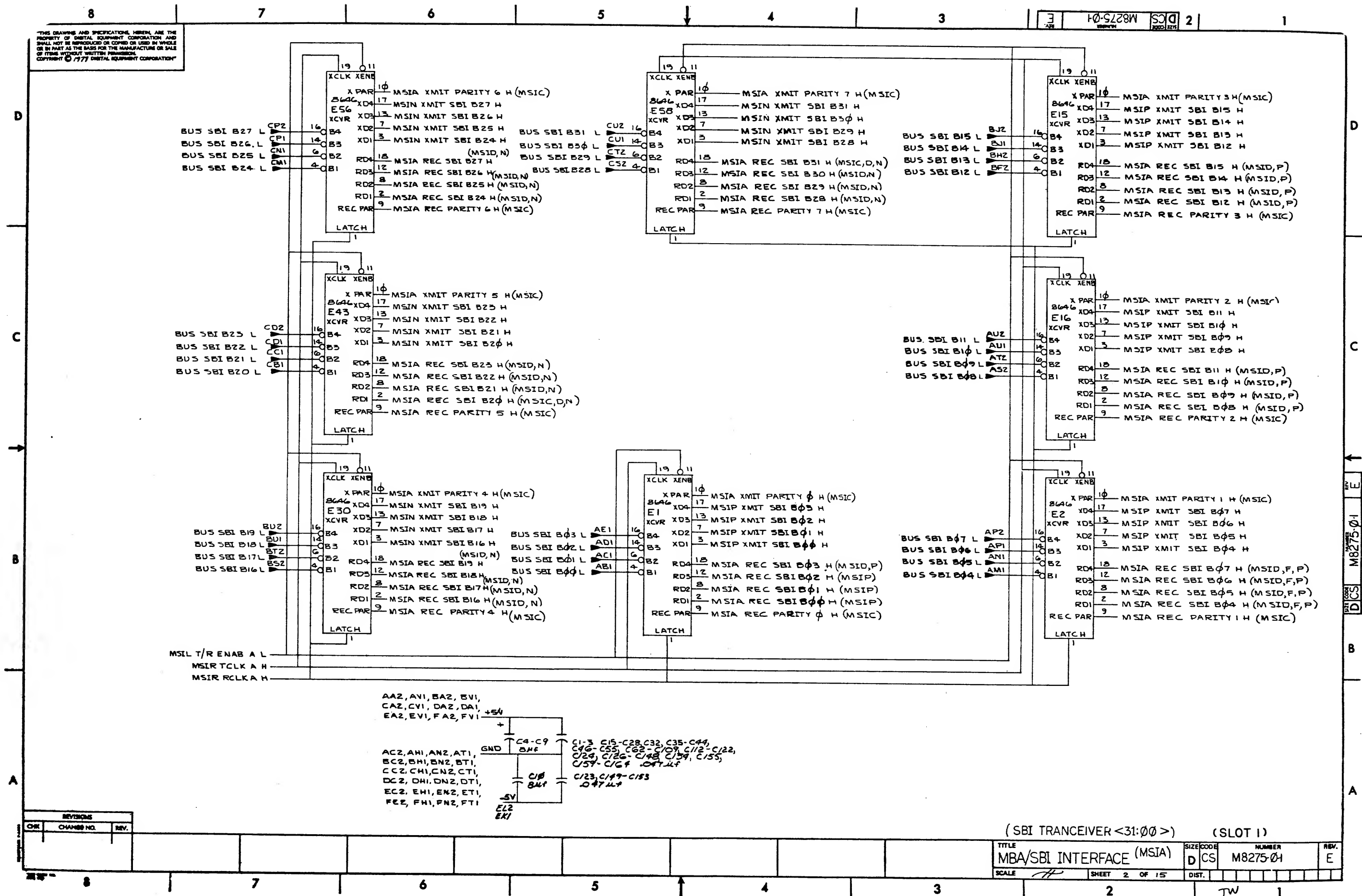
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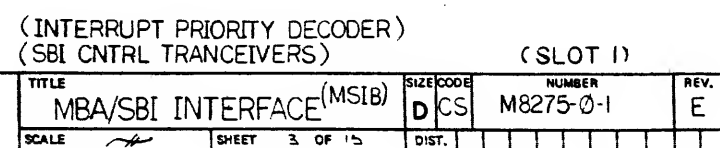
1-0-5128W  
E 2



REV.	DATE	BY	CHKD.
1	8/2/77	K. OKIN	K. OKIN
2	8/2/77	K. OKIN	K. OKIN
3	8/2/77	K. OKIN	K. OKIN
4	8/2/77	K. OKIN	K. OKIN
5	8/2/77	K. OKIN	K. OKIN
6	8/2/77	K. OKIN	K. OKIN
7	8/2/77	K. OKIN	K. OKIN
8	8/2/77	K. OKIN	K. OKIN

TITLE		NUMBER		REV.	
MBA/SBI INTERFACE (MSI)		M8275-0-1		E	
SCALE	1/1	SHEET	1 OF 15		
NEXT HIGHER ASSY.		DIST.			





REVISIONS		
CHK	CHANGE NO.	REV.

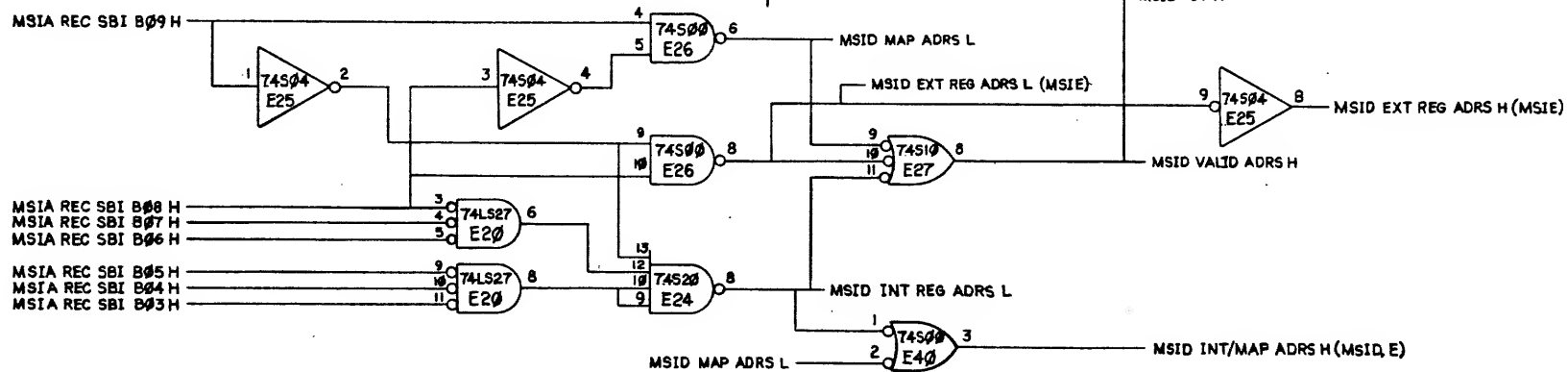
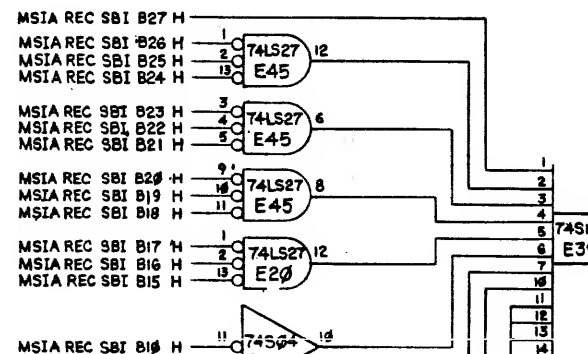
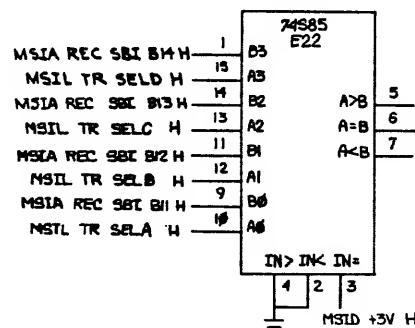
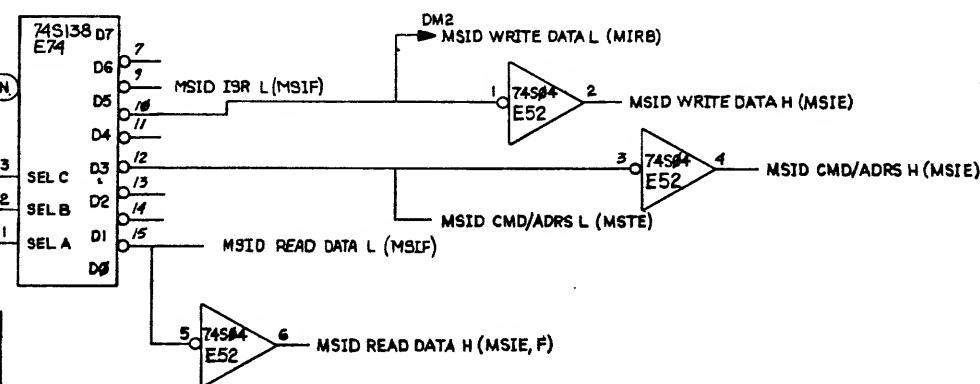
(SBI PARITY GEN/CHECK)				(SLOT 1)				
TITLE			SIZE		CODE		NUMBER	REV.
MBA/SBI INTERFACE			D		CS		M8275-0-1	E
(MSIC)								
SCALE		SHEET		OF		DIST.		
11		4		15				

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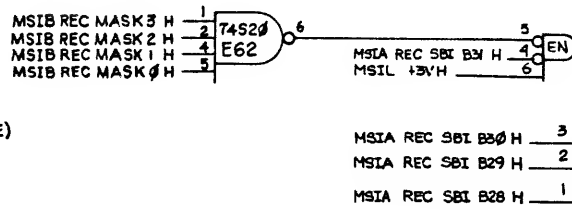
MSIF NOT USING SBI L  
MSIL XCYCLE L  
MSIC CNTRL PAR ERR H  
MSIC DATA PAR ERR H

DATA TYPE	2	1	0
ISR	1	1	0
WRITE DATA	1	0	1
CMD/ADRS	0	1	1
READ DATA	0	0	1

74S85	
EQUALS	
A=B	OUT
Y	L
N	L
Y	H
N	L

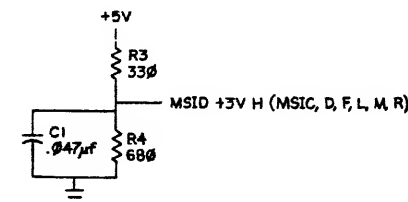
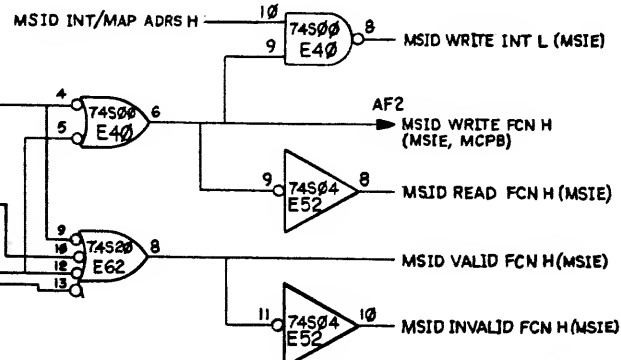


SIGNAL NAME	B09-B08	B07-B03	B02-B00
MSID MAP ADRS L	1	0	X
MSID EXT REG ADRS L	0	1	X
MSID INT REG ADRS L	0	0	X



INTERLOCKED FUNCTIONS  
TREATED AS NORMAL  
READS AND WRITES

MSIA REC SBI BITS			
WRITE FCN	B31	B30	B29
WRITE FCN	0	1	1
WRITE FCN	0	0	1
READ FCN	0	0	1
READ FCN	0	1	0



74S138													
ENABLE			SELECT			OUTPUT							
6	5	4	C	B	A	D0	D1	D2	D3	D4	D5	D6	D7
X	X	H	X	X	X	H	H	H	H	H	H	H	H
X	H	X	X	X	X	H	H	H	H	H	H	H	H
L	X	X	X	X	X	H	H	H	H	H	H	H	H
H	L	L	L	L	L	L	H	H	H	H	H	H	H
H	L	L	L	L	H	H	L	H	H	H	H	H	H
H	L	L	L	H	L	H	H	L	H	H	H	H	H
H	L	L	L	H	H	H	H	L	H	H	H	H	H
H	L	L	H	L	L	H	H	H	H	L	H	H	H
H	L	L	H	L	H	H	H	H	H	H	L	H	H
H	L	L	H	H	H	H	H	H	H	H	H	L	H

REVISIONS		
CHK	CHANGE NO.	REV.

(VALID ADRS/FUNCTION CHECK) (SLOT 1)

TITLE	MBA/SBI INTERFACE (MSID)	SIZE CODE	D CS	NUMBER	M8275-0-1	REV.	E
SCALE	SHEET 5 OF 15	DIST.					

**D**



C

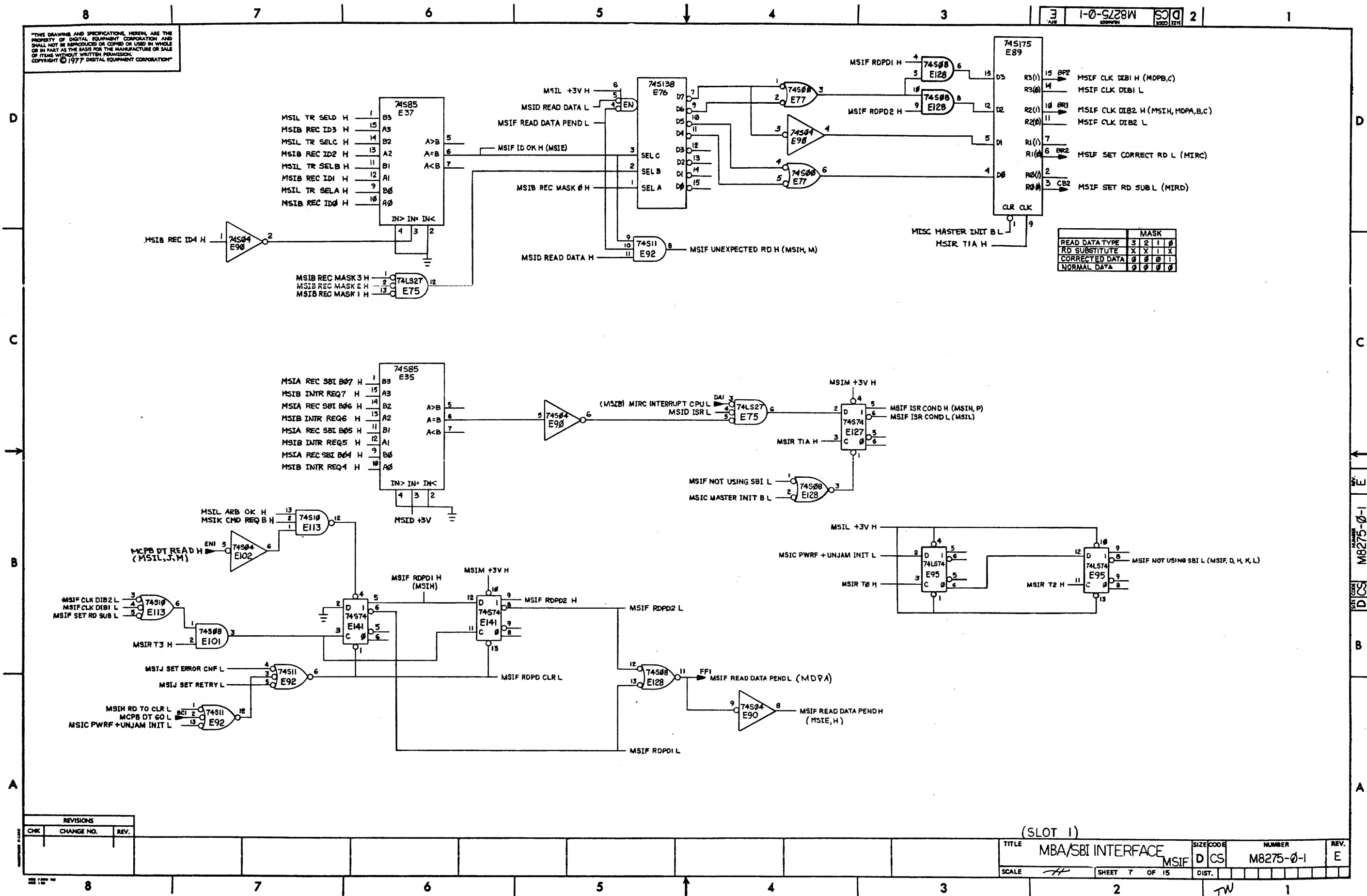


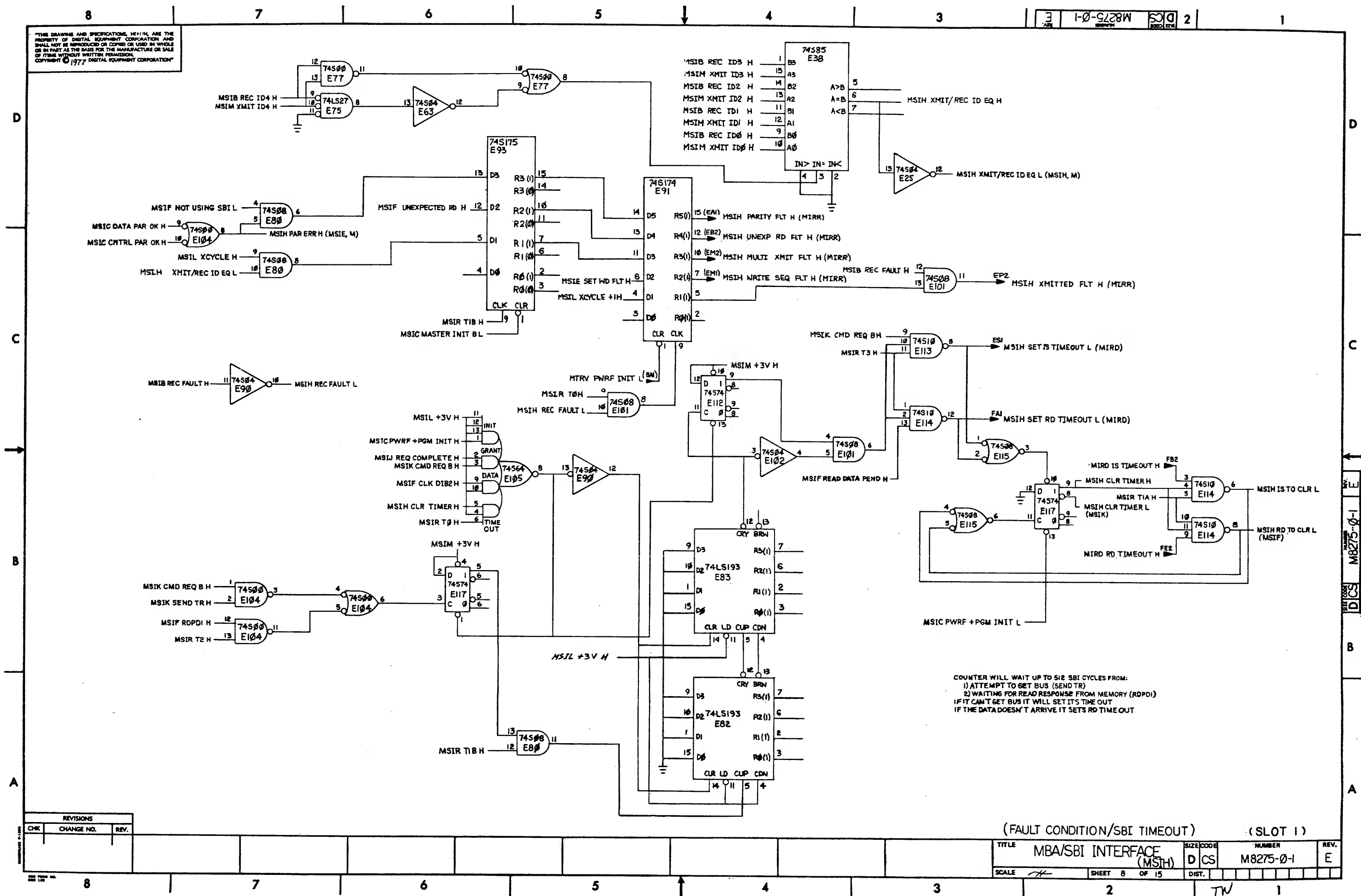
B



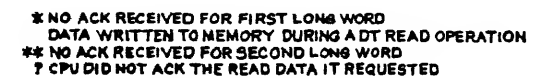
A |

A



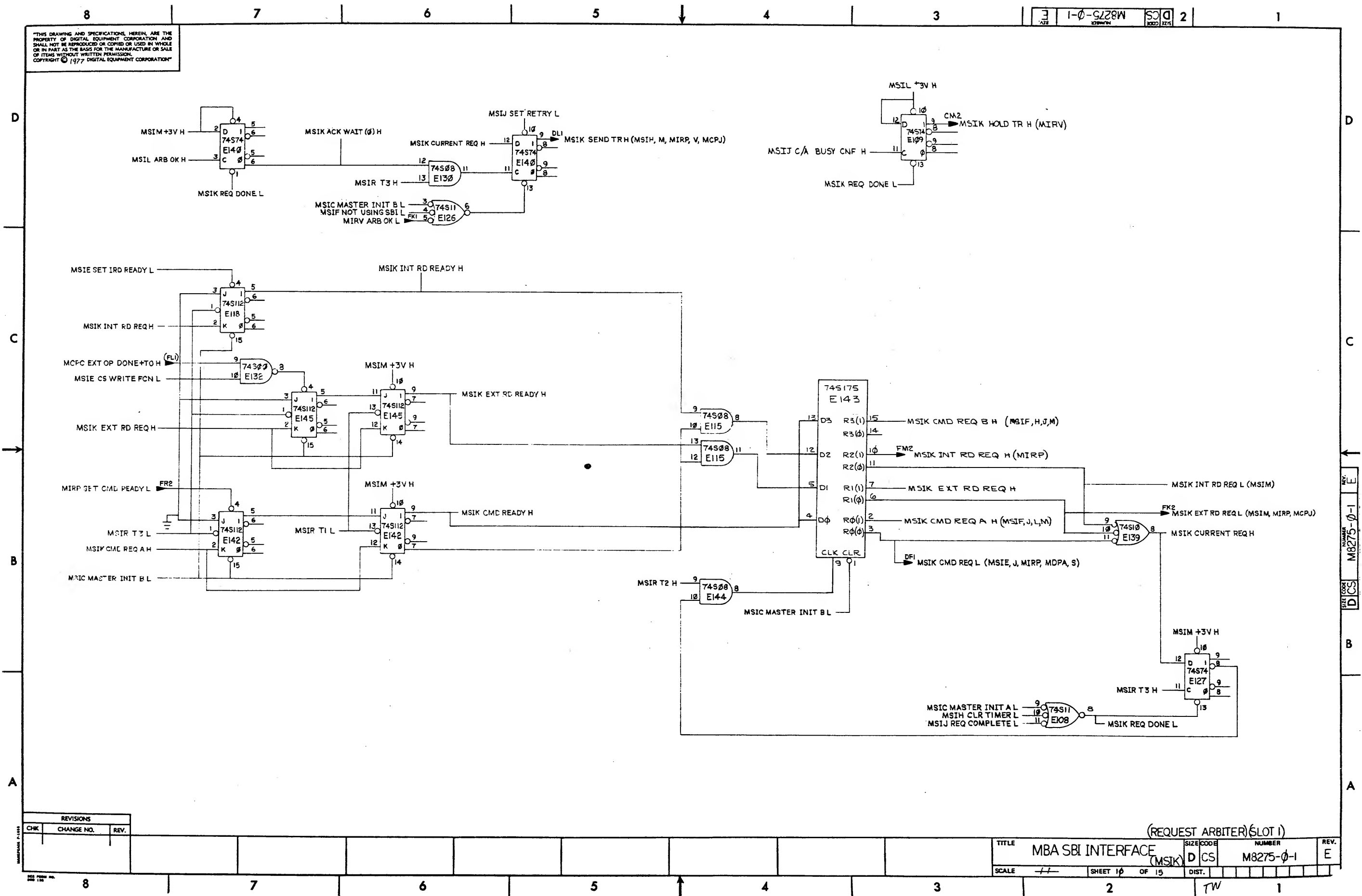


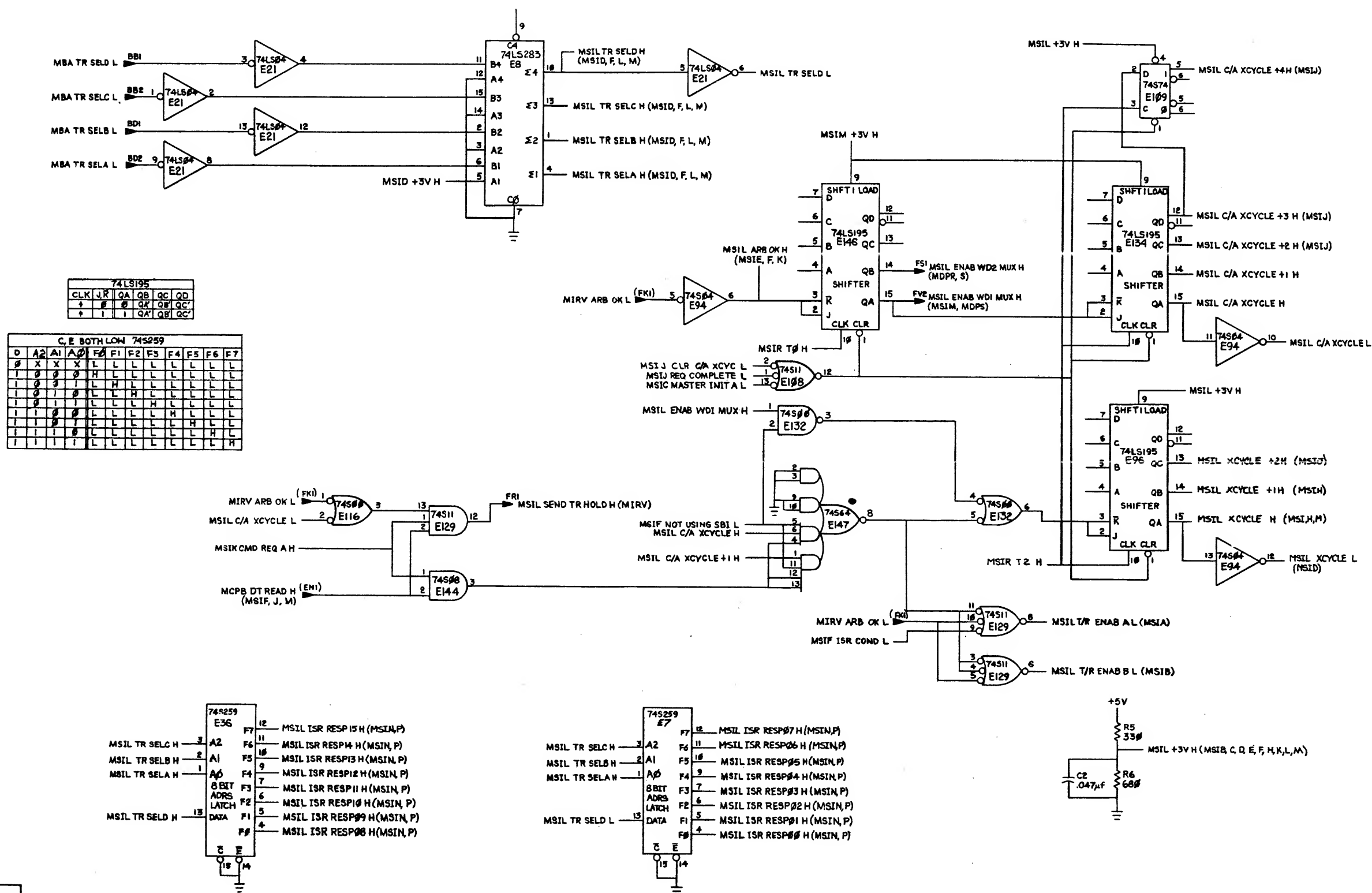




8										7										6										5										4										3										2										TW 1									
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TITLE	MBA SBI INTERFACE (MSL)	SIZE CODE	NUMBER	REV.
		D CS	M8275-01	E
SCALE	SHEET 9 OF 15	DATE		



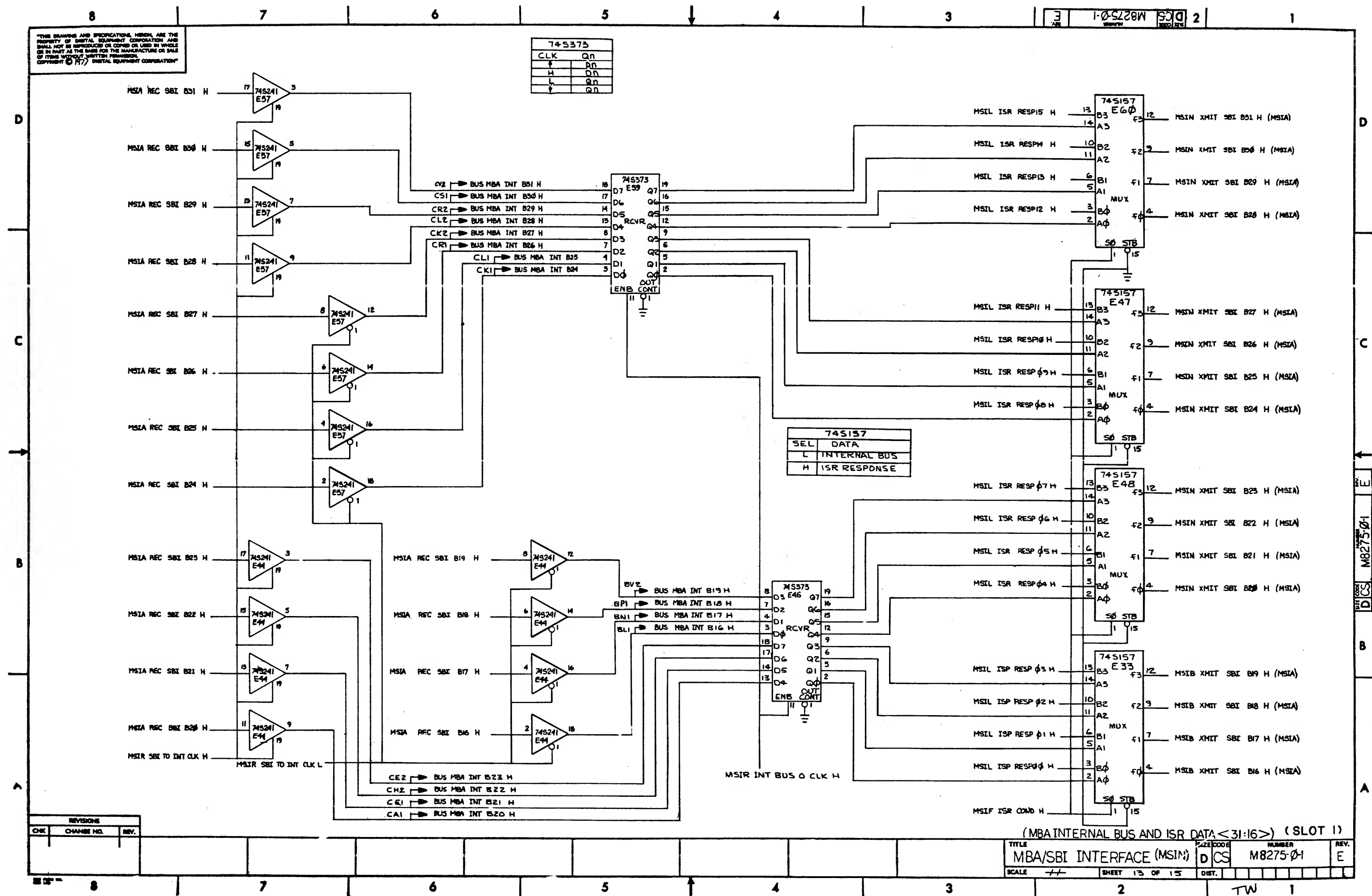


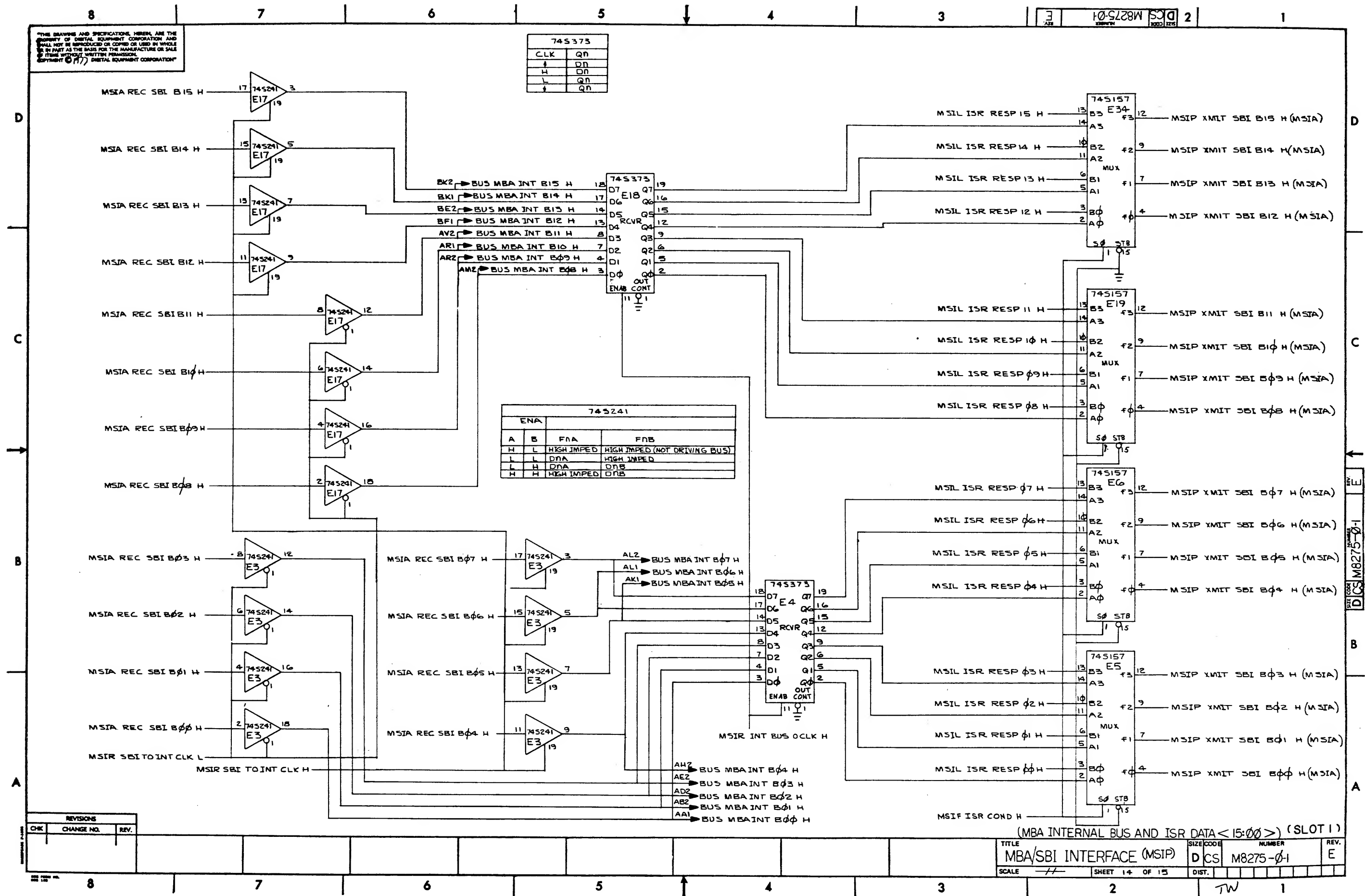
74LS195					
CLK	J, R	QA	QB	QC	QD
↑	0	0	QA'	QB'	QC'
↑	1	1	QA'	QB'	QC'

D	A <sub>2</sub>	A <sub>1</sub>	A <sub>0</sub>	F <sub>6</sub>	F <sub>5</sub>	F <sub>4</sub>	F <sub>3</sub>	F <sub>2</sub>	F <sub>1</sub>	F <sub>0</sub>
0	x	x	x	L	H	L	L	L	L	L
1	0	0	0	L	L	L	L	L	L	L
1	0	0	1	L	L	L	L	L	L	L
1	0	1	0	L	L	L	H	L	L	L
1	0	1	1	L	L	L	L	L	L	L
1	1	0	0	L	L	L	L	H	L	L
1	1	0	1	L	L	L	L	L	H	L
1	1	1	0	L	L	L	L	L	L	H
1	1	1	1	L	L	L	L	L	L	H

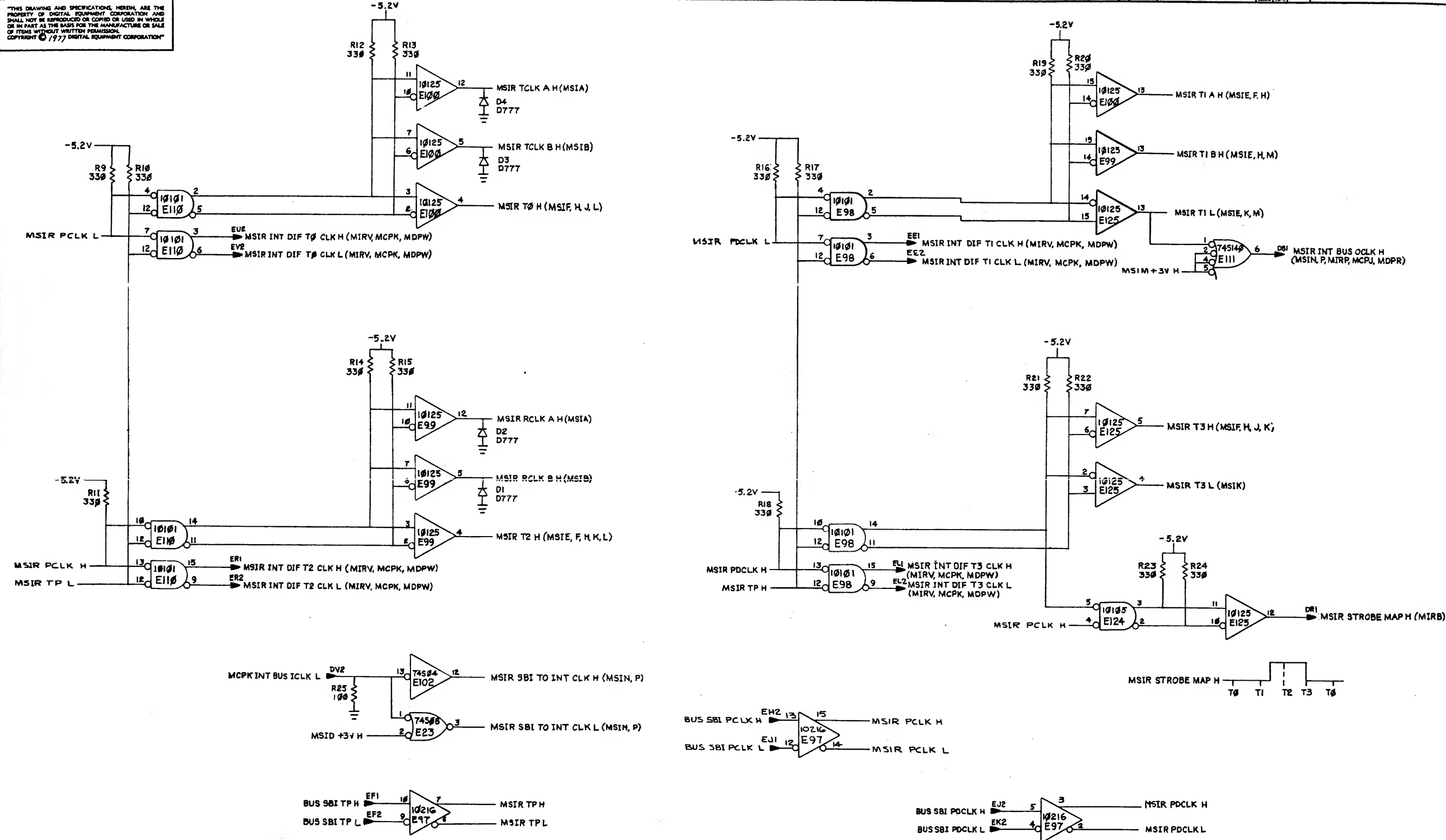
REVISIONS		
CHK	CHANGE NO.	REV.







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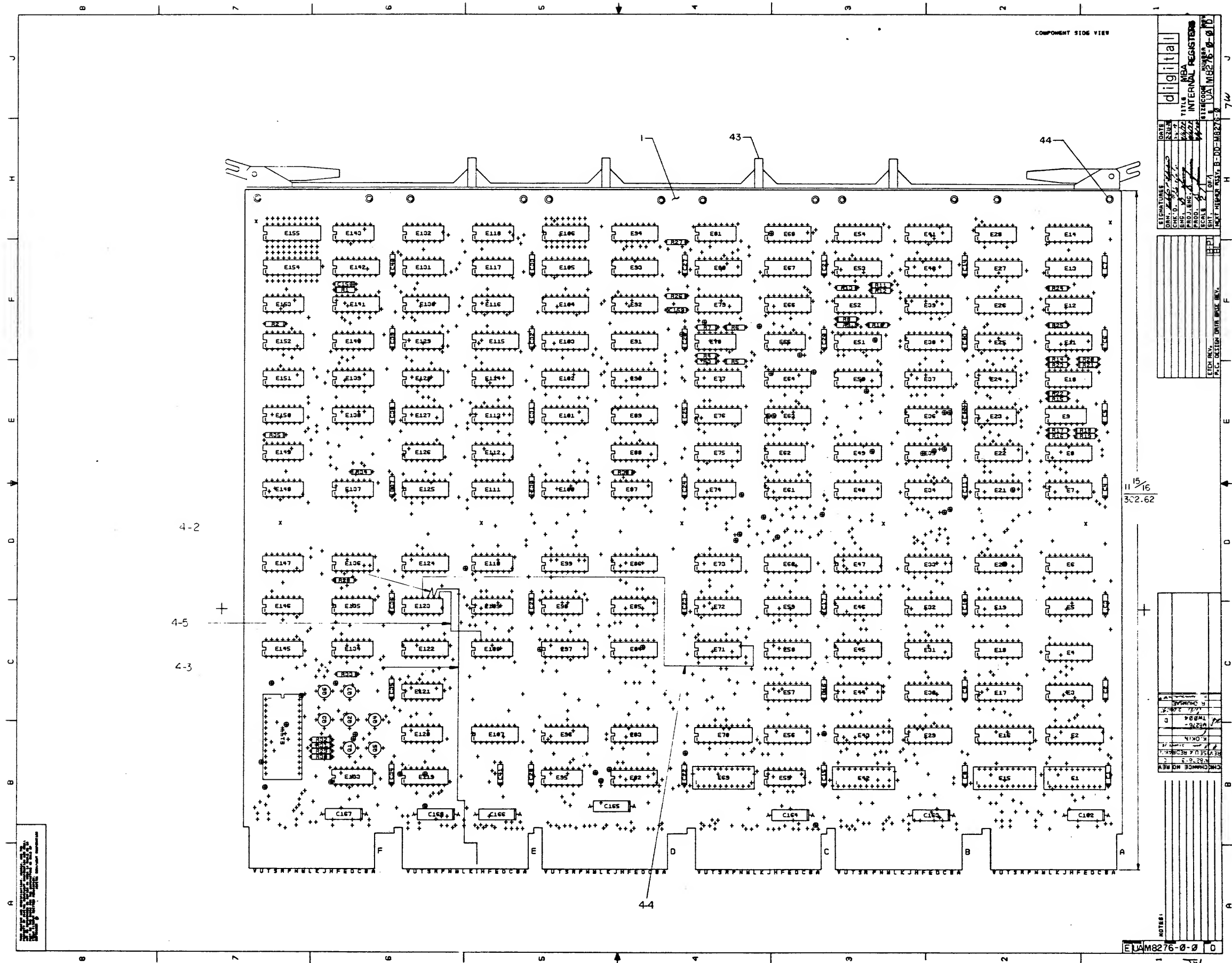
REV.	CHANGE NO.	CHK

(MSI CLOCKS)

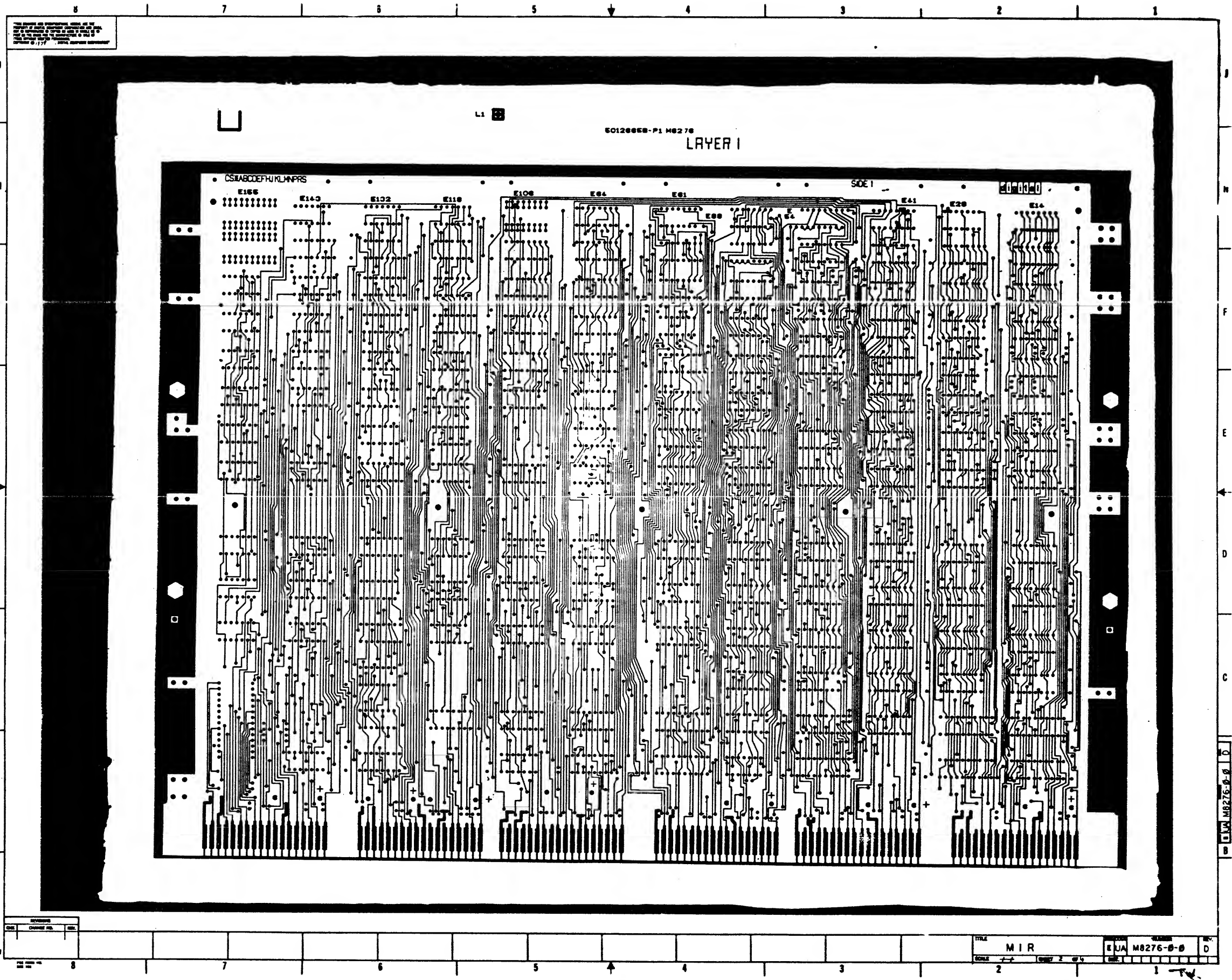
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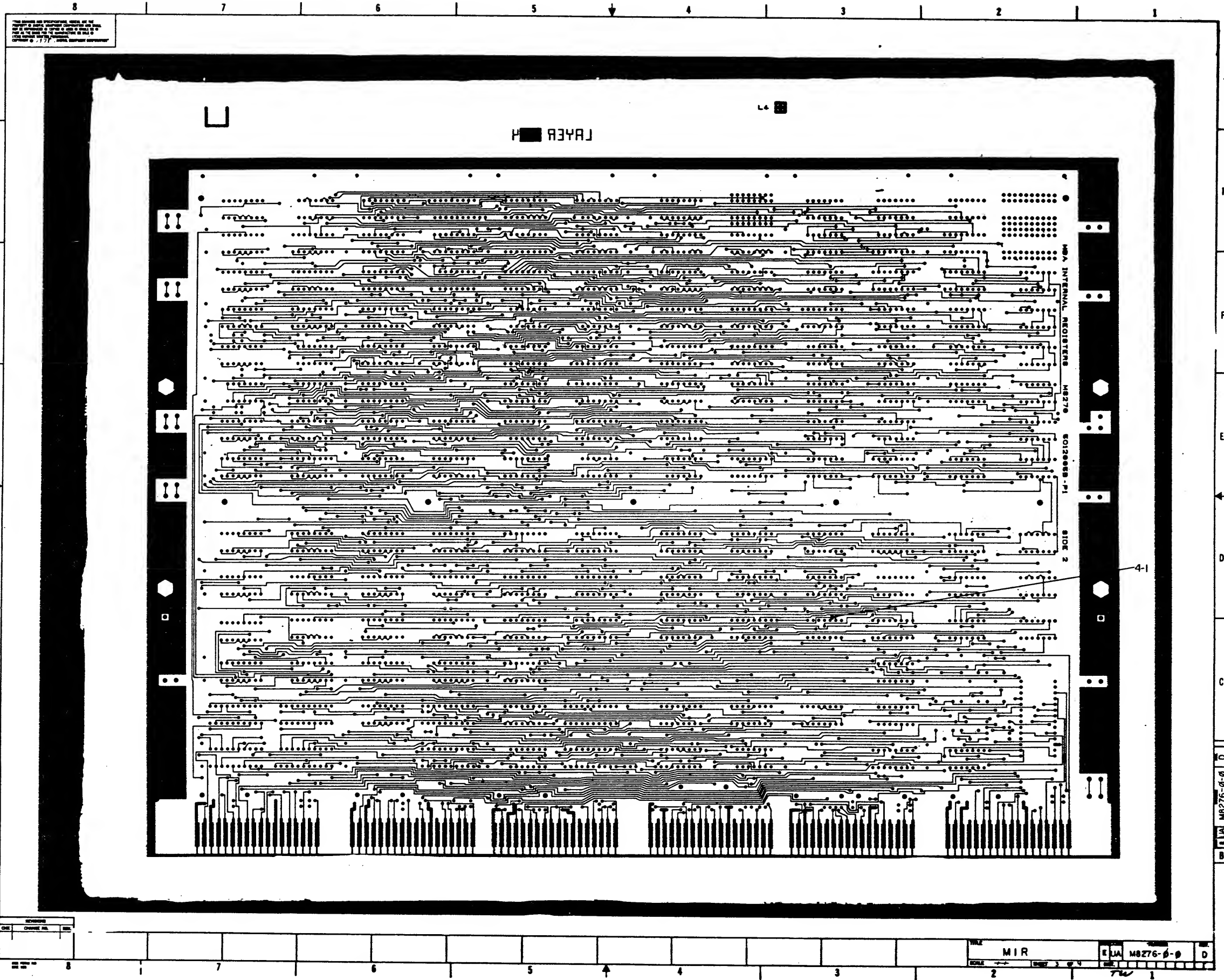
TITLE	MBA/SBI INTERFACE (MSIR)	SIZE/CODE	D CS	NUMBER	M8275-01	REV.	E
SCALE		SHEET	15 OF 15	DIST.			

8 7 6 5 4 3 2 1









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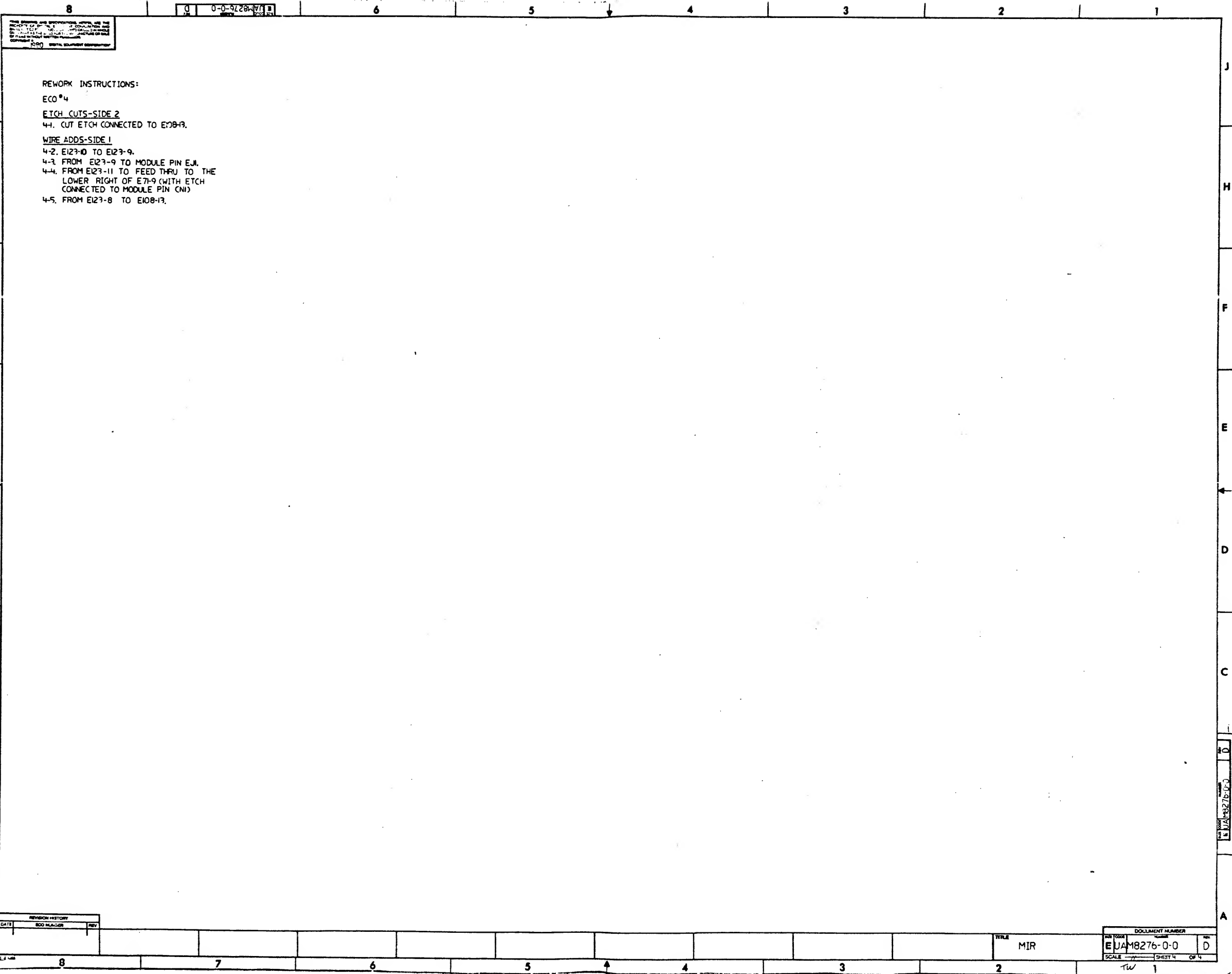
H 834AJ

M8276-0-0  
SIDE 2

4-1

REV	DATE	BY
1		

MIR	M8276-0-0	D
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REWORK INSTRUCTIONS:  
ECO #4  
ETCH CUTS-SIDE 2  
4-1. CUT ETCH CONNECTED TO E108-13.  
WIRE ADDS-SIDE 1  
4-2. E123-10 TO E123-9.  
4-3. FROM E123-9 TO MODULE PIN E.J.  
4-4. FROM E123-11 TO FEED THRU TO THE LOWER RIGHT OF E71-9 (WITH ETCH CONNECTED TO MODULE PIN CNI)  
4-5. FROM E123-8 TO E108-13.

REVISION HISTORY		
DATE	ECO NUMBER	REV

TITLE  
MIR

DOCUMENT NUMBER  
EJAM8276-0-0  
SCALE 1:1  
SHEET 1 OF 1

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
1	1	E-MD-5012665-0-0	5012665-00	M.I.R.	1		
2	2		1012784-00	.047 MFD 50V +80-20% CER	41		C1-C17,C20-C41,C158,C159
3	3		1012084-01	8 MFD 25V +75-10% AL EL	7		C162-C168
4	4		1300295-00	330.0 .25 W 5.0 % CC	2		R1,R26
5	5		1301424-00	680.0 .25 W 5.0 % CC	2		R2,R27
6	6		1300365-00	1.0 K .25 W 5.0 % CC	30		R3-R25,R28-R33,R35
7	7		1300391-00	1.50 K .25 W 5.0 % CC	1		R38
8	8		1301874-00	5.60 K .25 W 5.0 % CC	1		R34
9	9		1511686-00	DEC5433 FET N 350MW 10 25 1A	6		Q1-Q4,Q6,Q7
10	10		1503014-00	DEC 3646 NPN 200MW SI 15 5 30	1		Q5
11	11		1910532-00	74S00 NAND GATE-QUAD 2IN	8		E110,E112-E114,E117,E120,E129,E148
12	12		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	1	CONT	E143
13	13		1912389-00	74S08 AND GATE-QUAD 2IN,PO	5		E87,E98,E109,E127,E132
14	14		1910534-00	74S04 INVERTER GATE-HEX 1I	2		E126,E149
15	15		1912803-00	774LS04 INVERTER GATE, HEX	5		E9,E24,E52,E78,E108
16	16		1910536-00	74S10 NAND GATE-TRIPLE 3IN	5		E74,E111,E118,E134,E136
17	17		1910537-00	74S11 AND GATE-TRIPLE 3INP	5		E116,E121,E123,E128,E137
18	18		1910539-00	74S20 NAND GATE-DUAL 4INPU	1		E135
19	19		1913340-00	74S32 OR GATE-QUAD 2IN	1		E133
20	20		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	2		E28,E81
21	21		1910542-00	74S64 A-O-I GATE 4-2-3-2	1		E131
22	22		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	4		E140,E150-E152
23	23		1912825-00	LS76 FF-JK DUAL W/PRESET	11		E82,E85,E86,E96,E99,E100,E107,E125,E141,E84,E122
24	24		1911983-00	74S133 NAND GATE-POSITIVE 1	3	CONT	E41,E97,E124
25	25		1911675-00	74S138 DECODER/DEMUX 3-8 LIN	1		E115
26	26		1910546-00	74S140 NAND GATE-DUAL 4INPU	4		E55,E138,E139,E147
27	27		1910548-00	74S157 MUX 1 OF 2 (QUAD)	2		E63,E77
28	28		1912844-00	LS151 MUX 1 OF 8 & DATA	32		E22,E33,E37,E44-E51,E53,E54,

REVISION HISTORY			BASIC PART NO: M8276		DRN:	F. SMART	DATE: 06-OCT-78	D I G I T A L			
ENG	ECO NUMBER	REV	SECTION A OF A		CHK'D:	F. SMART	DATE: 06-OCT-78	TITLE PARTS LIST			
---	INIT	IC	SECTION VARIATION INDEX		CHK'D:	F. SMART	DATE: 06-OCT-78	MBA INTERNAL REGISTERS			
S.J	M8276-TW004	ID	[A] 00		DES.ENG:	K. OKIN	DATE: 06-OCT-78	DOCUMENT NUMBER			
			[B]		RESP.ENG.:	K. OKIN	DATE: 06-OCT-78	SIZE	CODE	NUMBER	REV
			[C]		MFG.ENG.:	M. TERILLO	DATE: 06-OCT-78	K	PL	M8276-0-DBP	D
			[D]		ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #
			[E]		ID-UA-M8276-0-0				Z1845.PLS		11
			[F]								
			[G]								
			[H]								
			[I]								
			[J]								
			[K]								
			[L]								
			[M]								
			[N]								

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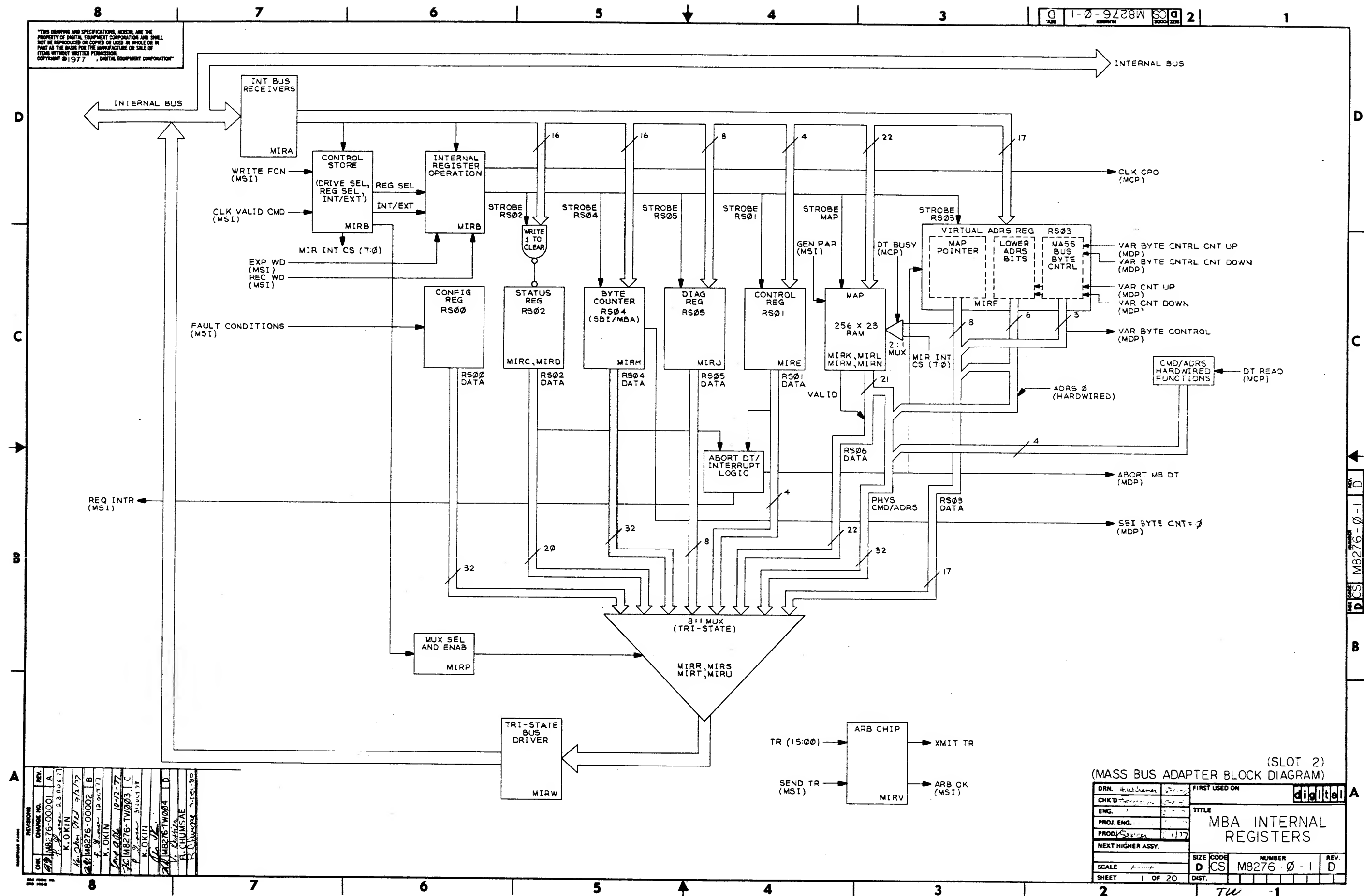
TW

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
29	29		1912697-00	LS174 FF-D HEX W/CLEAR	4	CONT E56-E60,E67,E68,E79,E80,E89, CONT E91-E94,E101-E105
30	30		1910957-00	74S175 FF-D QUAD COMMON CLO	1	E64,E71,E83,E90
31	31		1910096-00	DEC 74191 COUNTER,SYNCHR. UP/D	5	E142
32	32		1911573-00	74S280 PARITY GEN/CHKR,9BIT	3	E72,E73,E75,E76,E88
33	33		1913462-00	74S240 OCTAL BUFFER,INVERTI	4	E23,E62,E65
34	34		1912860-00	LS259 LATCH 8BIT	1	E1,E15,E42,E69
35	35		1913671-00	74S374 FF-D OCTAL TRISTATE	4	E130
36	36		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	1	E2,E16,E43,E70
37	37		1911415-00	10125 ECL TO TTL TRNSLTR	1	E146
38	38		1913294-00	93S16 COUNTER,SYNCH UP BIN	8	E119
39	39		1913730-00	DC 101 PRIORITY ARBITRATOR	1	E34,E36,E38-E40,E61,E66,E35
40	40		1912069-00	MEMORY READ/WRITE,25	23	E144
41	41		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	2	CONT E3-E8,E10-E14,E17-E21,E25-E27, CONT E29-E32
42	42		1912805-00	LS08 AND GATE-QUAD 2IN,PO	1	E95,E145
43	43		1210711-02	/REPLACED BY 12-16988-02	1	E153
44	44		9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
45	45		9105740-55	WIRE(WRAP)30AWG UL1423 A/R		

46 NOTE: SPARE I.C.'S ARE E106,E154, & E155

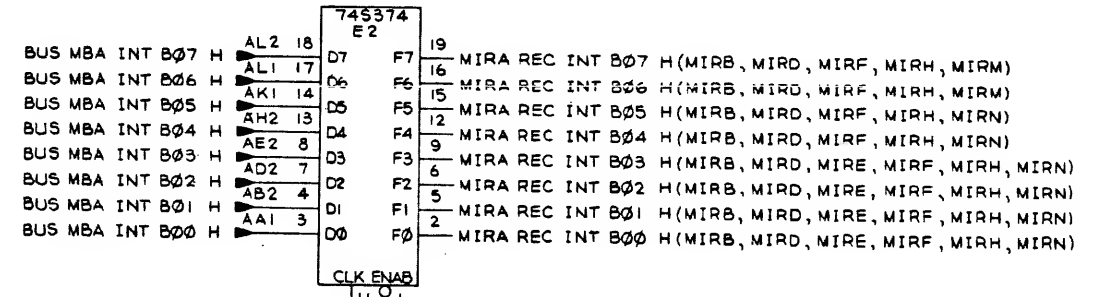
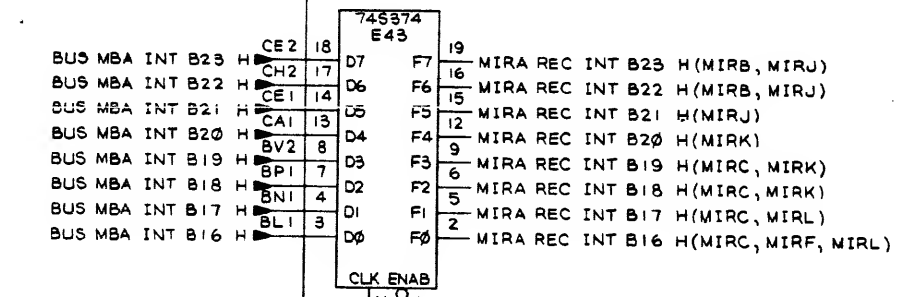
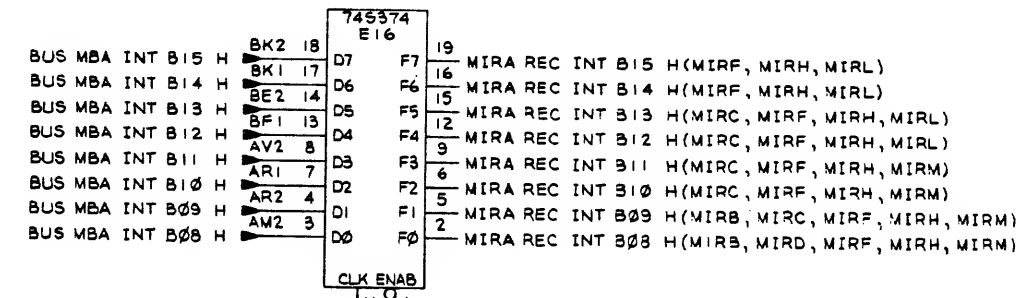
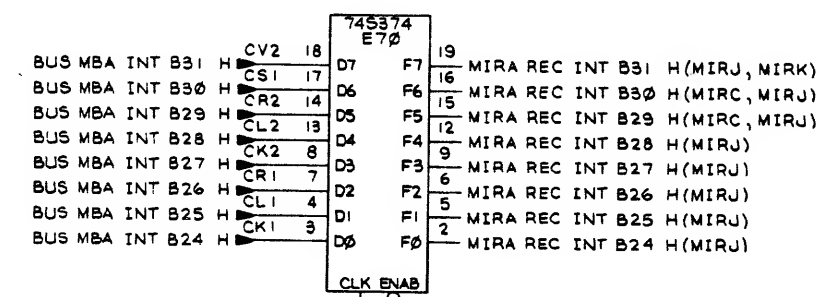
D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							MBA INTERNAL REGISTERS		K	PL	M8276-0-DBP	D

TW



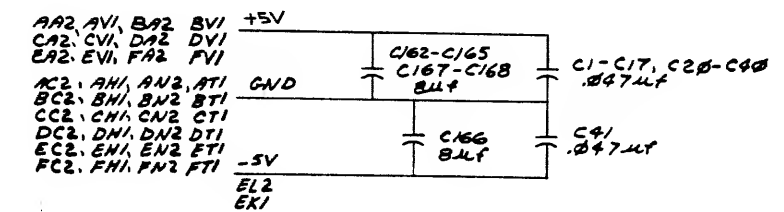
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1-0-9228W



MCPK INT BUS ICLK L DV2

ENAB	CLK	Fn
L	↑	Dn → Fn
L	H, L, ↑	Fn
H	X	HIGH IMPEDANCE BUT POSITIVE CLOCK TRANSITIONS WILL STROBE NEW DATA INTO ITS INTERNAL MEMORY WHICH WILL APPEAR AT Fn WHEN ENAB GOES LOW.

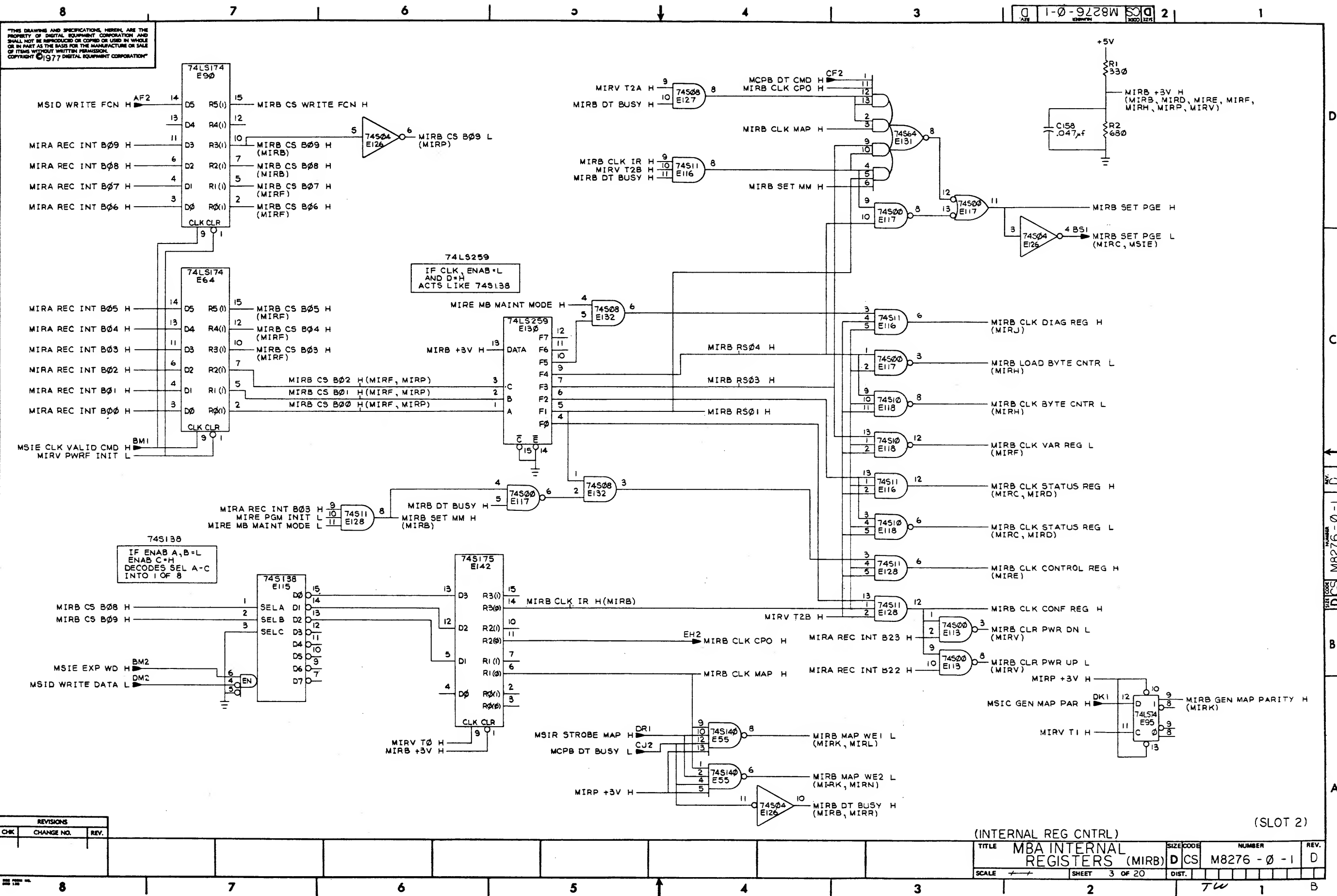


REVISIONS		
CHK	CHANGE NO.	REV.

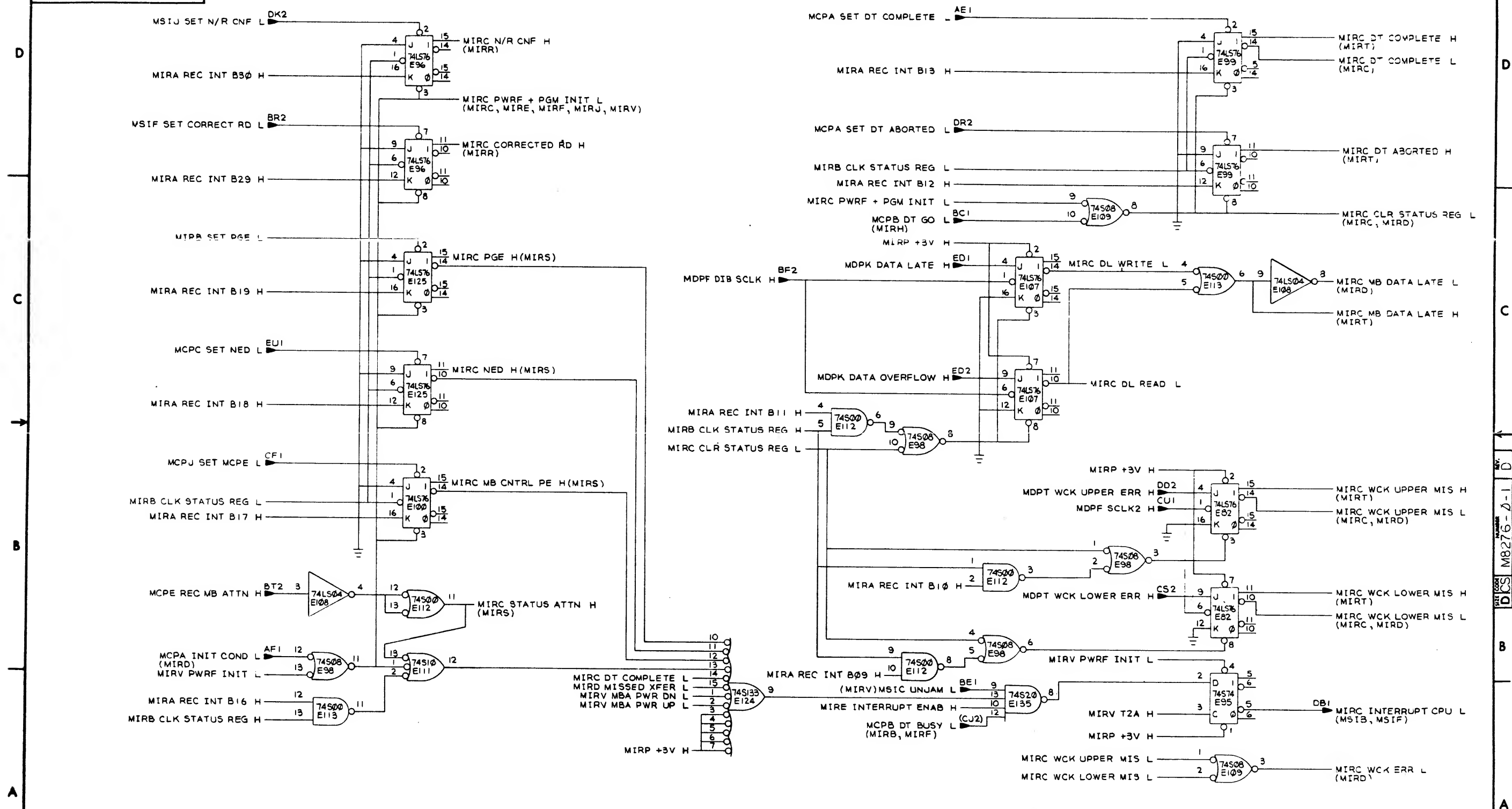
(MBA INTERNAL BUS RECEIVERS) (SLOT 2)

TITLE	MBA INTERNAL REGISTERS (MIRA)	SIZE/CODE	D CS	NUMBER	M8276-0-1	REV.	0
SCALE	+	SHEET	2 OF 20	DIST.			









REVISIONS		
CHK	CHANGE NO.	REV.

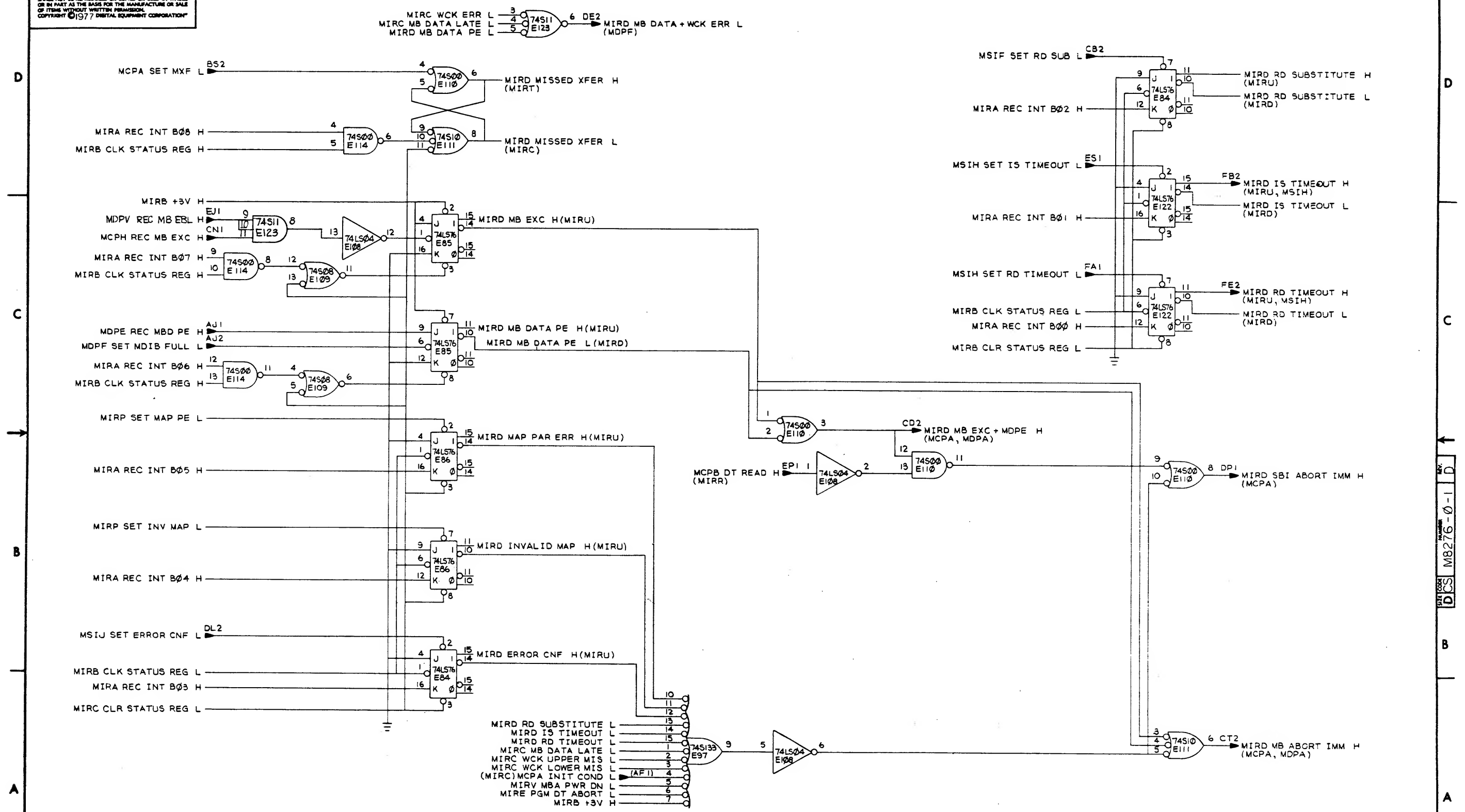
(STATUS REGISTER)

(SLOT 2)

TITLE		MBA INTERNAL REGISTERS (MIRC)		SIZE	CODE	NUMBER		REV.
				D	CS	M8276 - Ø - 1		D
SCALE	→ →	SHEET	4 OF 20	DIST.				

Tu

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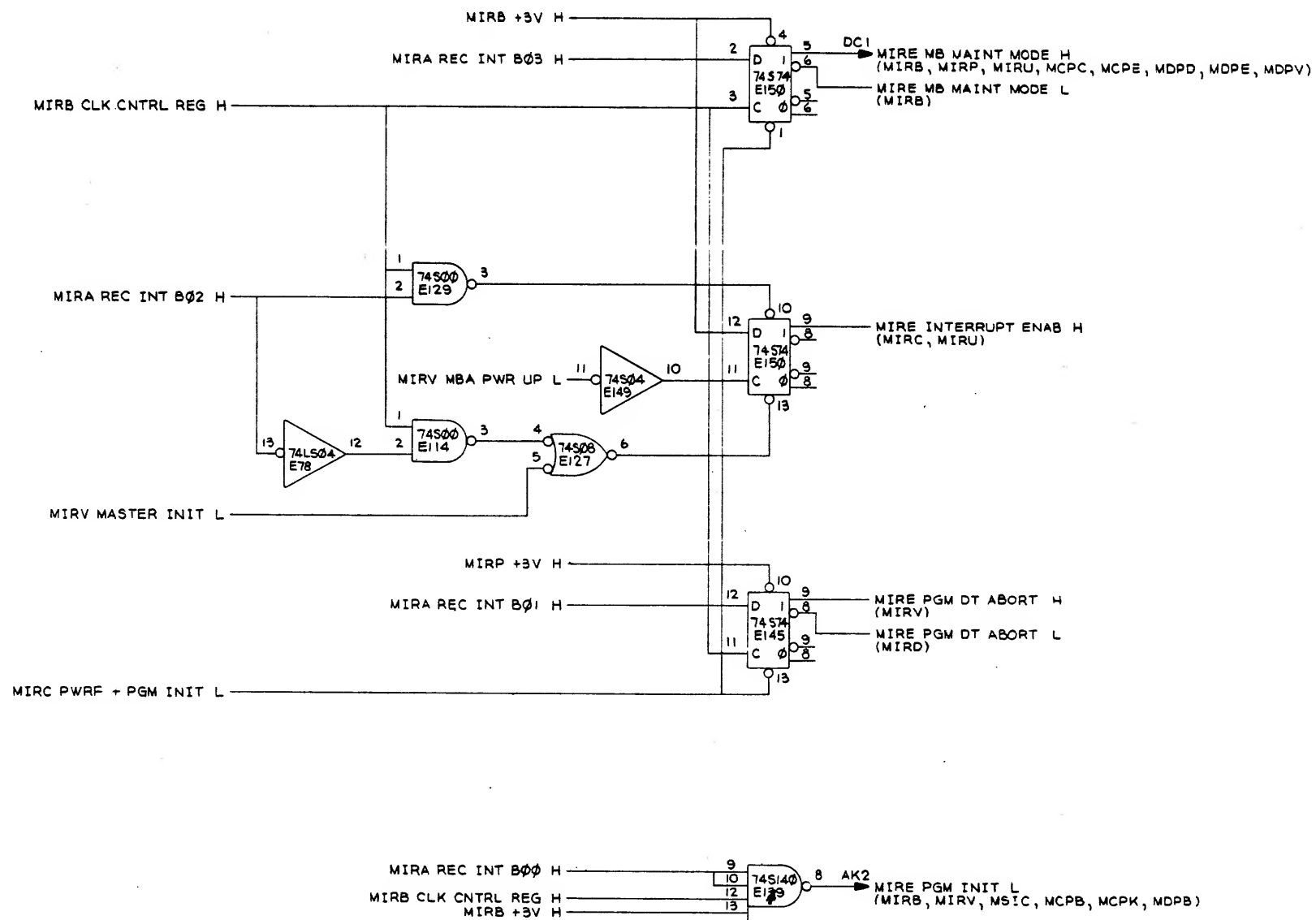


REVISIONS		
CHK	CHANGE NO.	REV.

(STATUS REGISTER)		(SLOT 2)	
TITLE	MBA INTERNAL REGISTERS (MIRD)	SIZE CODE	NUMBER
SCALE	7W	SHEET	5 OF 20
DIST.			

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1-0-9228W 2



REVISIONS		
CHK	CHANGE NO.	REV.

(CONTROL REGISTER)

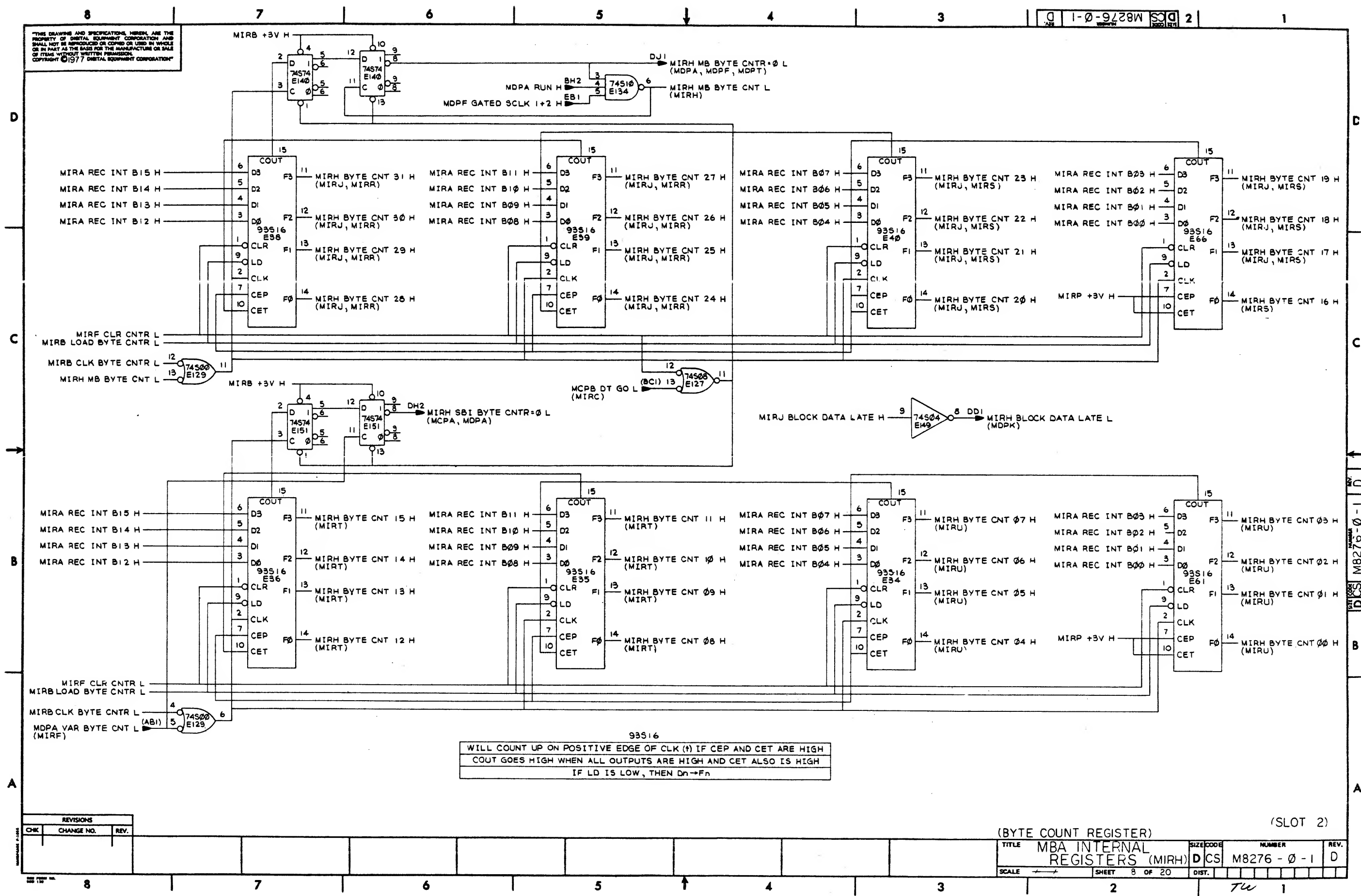
(SLOT 2)

TITLE		SIZE CODE	NUMBER	REV.
MBA INTERNAL REGISTERS (MIRE)		D CS	M8276-0-1	D
SCALE		SHEET 6 OF 20		DIST.



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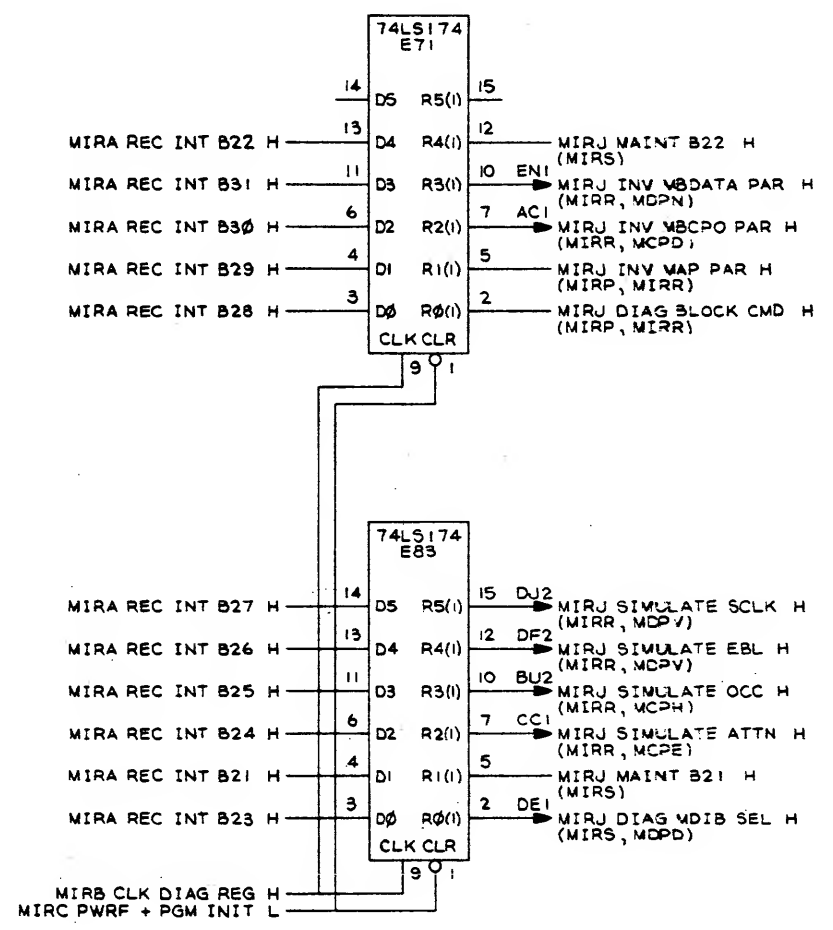
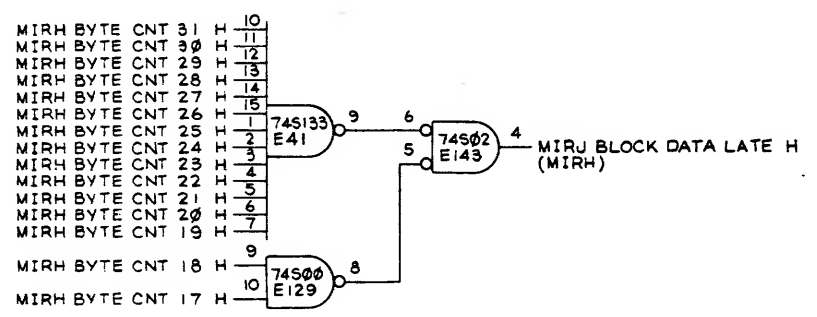
1-0-9278W DCS 2



REVISIONS		
CHK	CHANGE NO.	REV.

(BYTE COUNT REGISTER)		(SLOT 2)	
TITLE		NUMBER	
MBA INTERNAL REGISTERS (MIRH)		DCS M8276-0-1	
SCALE		REV.	
SHEET 8 OF 20		D	

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REVISIONS		
CHK	CHANGE NO.	REV.

(DIAGNOSTIC REG) (SLOT 2)

TITLE	MBA INTERNAL REGISTERS (MIRJ)	SIZE CODE	D CS	NUMBER	M8276 - 0 - 1	REV.	D
SCALE	1:1	SHEET	9 OF 20	DIST.			

Tu 1

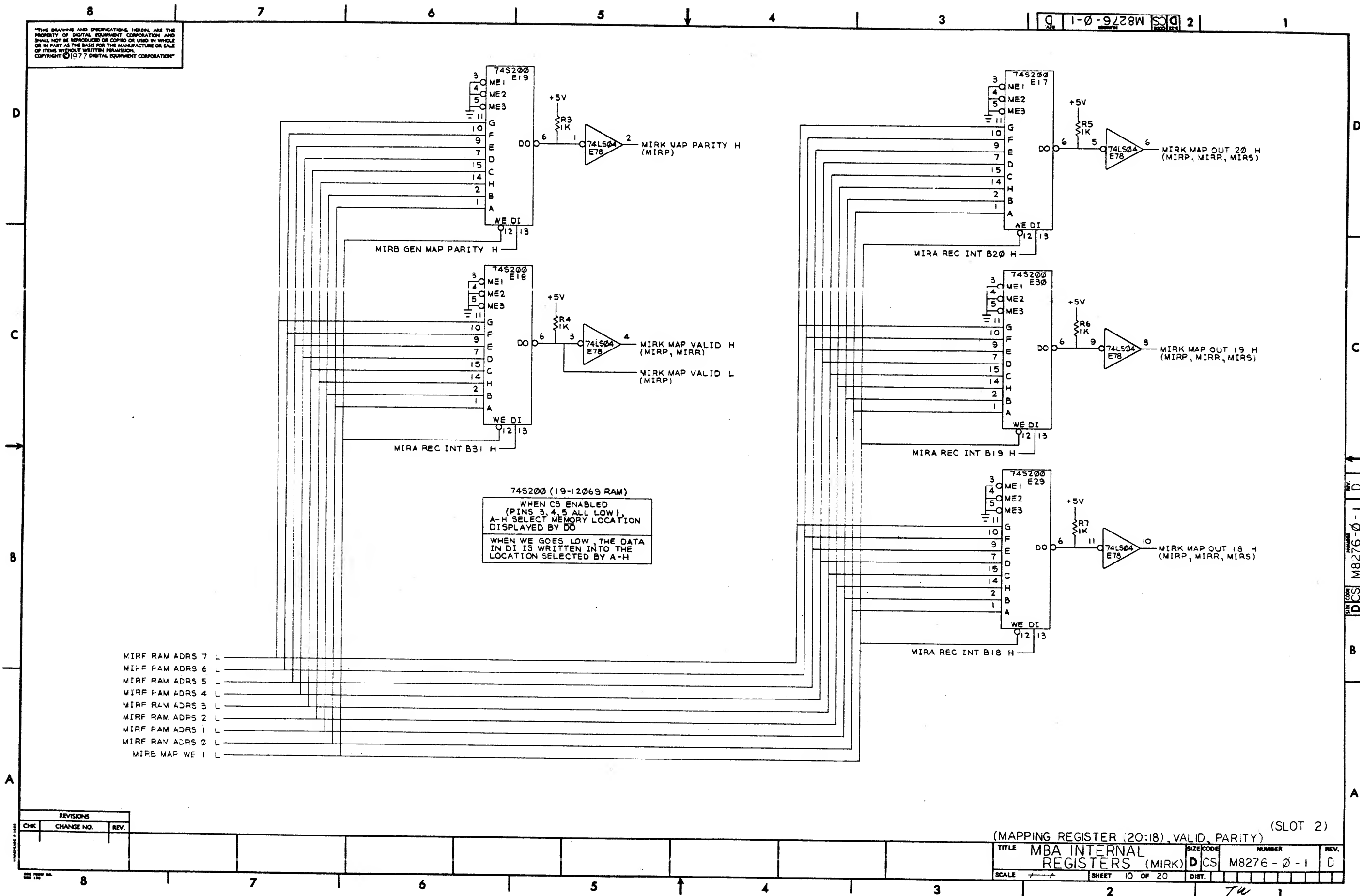
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MIRF RAM ADRS 7 L  
MIRF RAM ADRS 6 L  
MIRF RAM ADRS 5 L  
MIRF RAM ADRS 4 L  
MIRF RAM ADRS 3 L  
MIRF RAM ADRS 2 L  
MIRF RAM ADRS 1 L  
MIRF RAM ADRS 0 L  
MIRF MAP WE 1 L

74S200 (19-12069 RAM)  
WHEN CS ENABLED  
(PINS 3, 4, 5 ALL LOW),  
A-H SELECT MEMORY LOCATION  
DISPLAYED BY DO  
WHEN WE GOES LOW, THE DATA  
IN DI IS WRITTEN INTO THE  
LOCATION SELECTED BY A-H

(MAPPING REGISTER (20:18), VALID, PARITY) (SLOT 2)

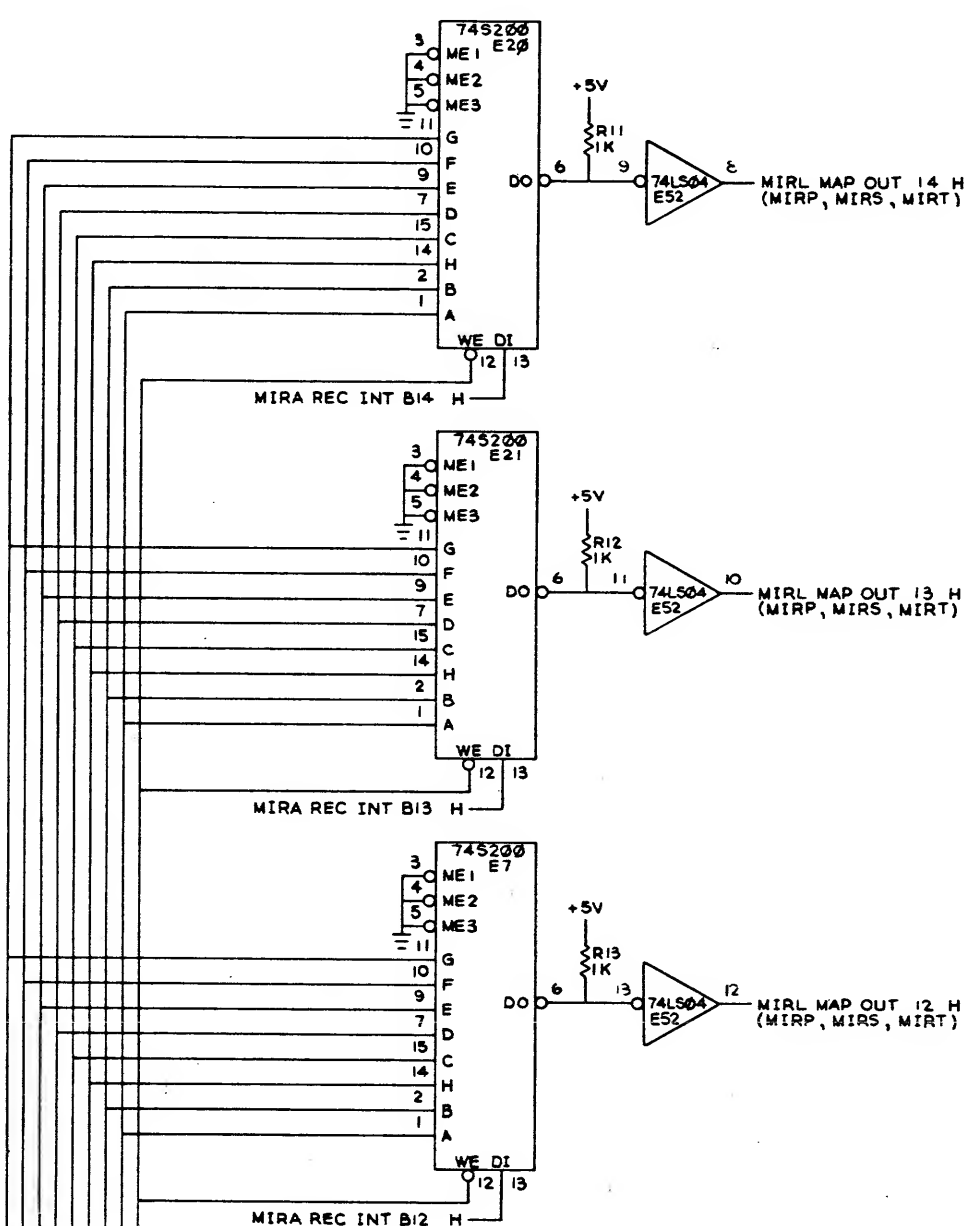
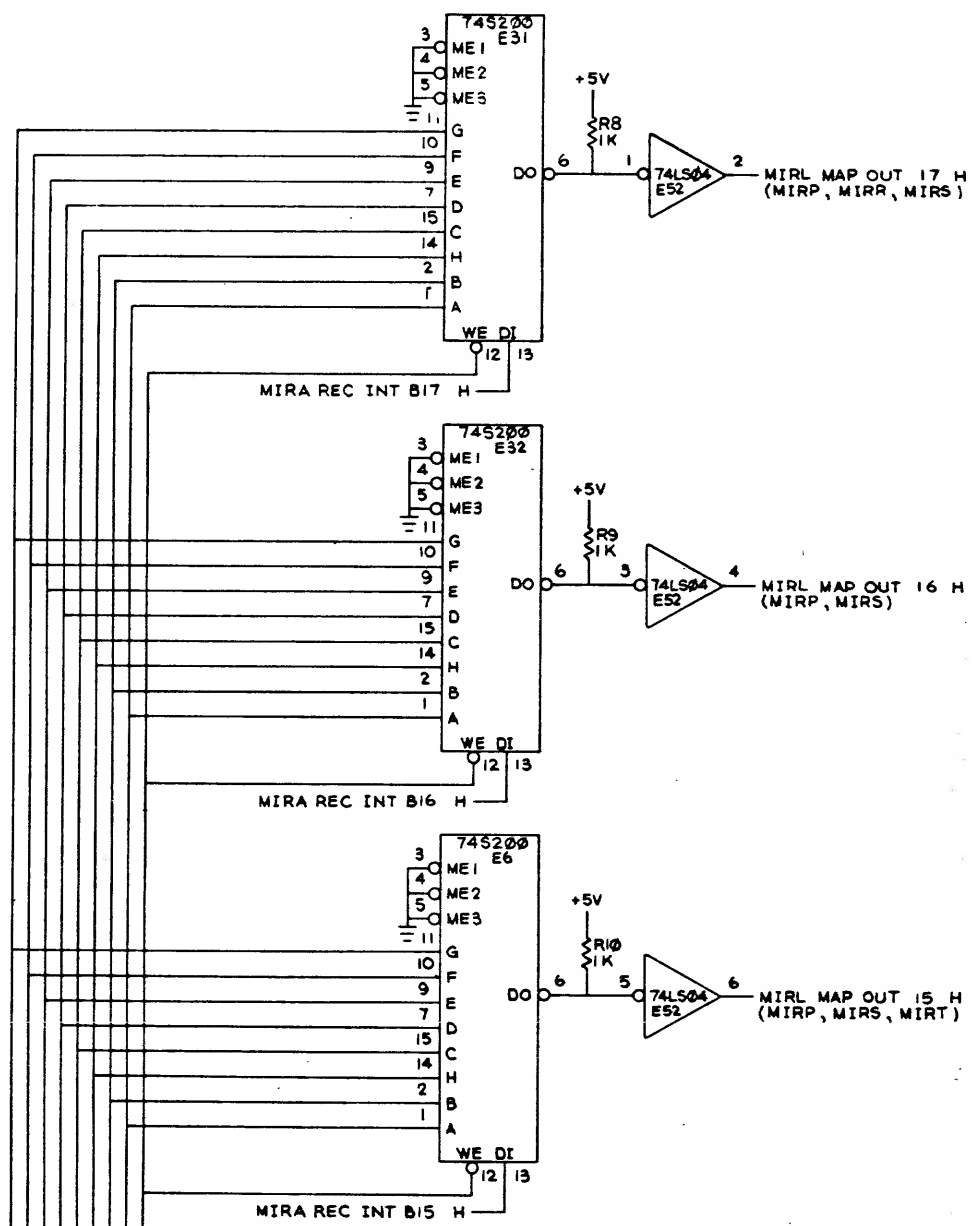
TITLE	MBA INTERNAL REGISTERS (MIRK)	SIZE CODE	D CS	NUMBER	M8276-0-1	REV.	C
SCALE	+	SHEET	10 OF 20	DIST.			



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1-0-9228W 2

MIRF RAM ADRS 7 L  
MIRF RAM ADRS 6 L  
MIRF RAM ADRS 5 L  
MIRF RAM ADRS 4 L  
MIRF RAM ADRS 3 L  
MIRF RAM ADRS 2 L  
MIRF RAM ADRS 1 L  
MIRF RAM ADRS 0 L  
MIRB MAP WE 1 L



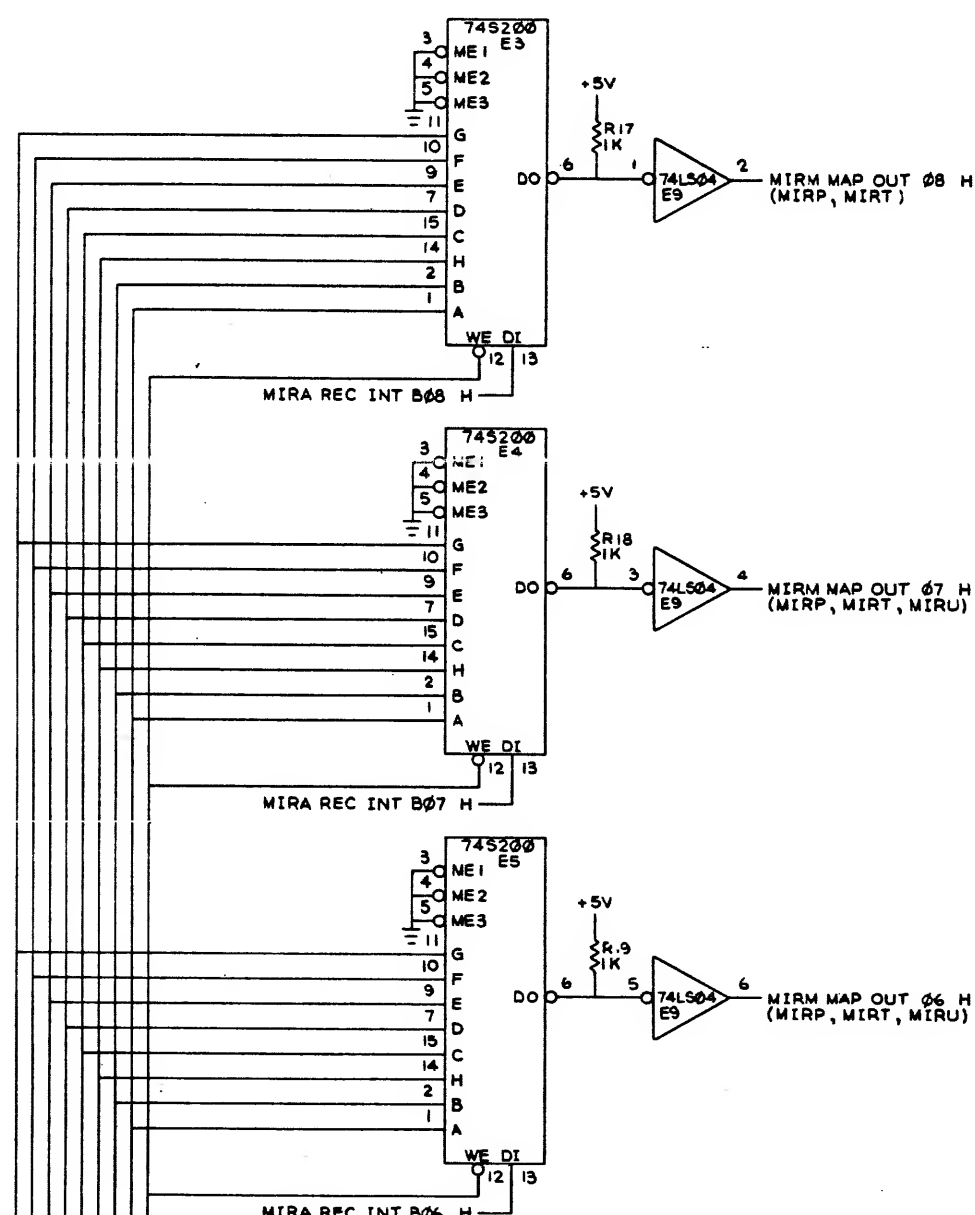
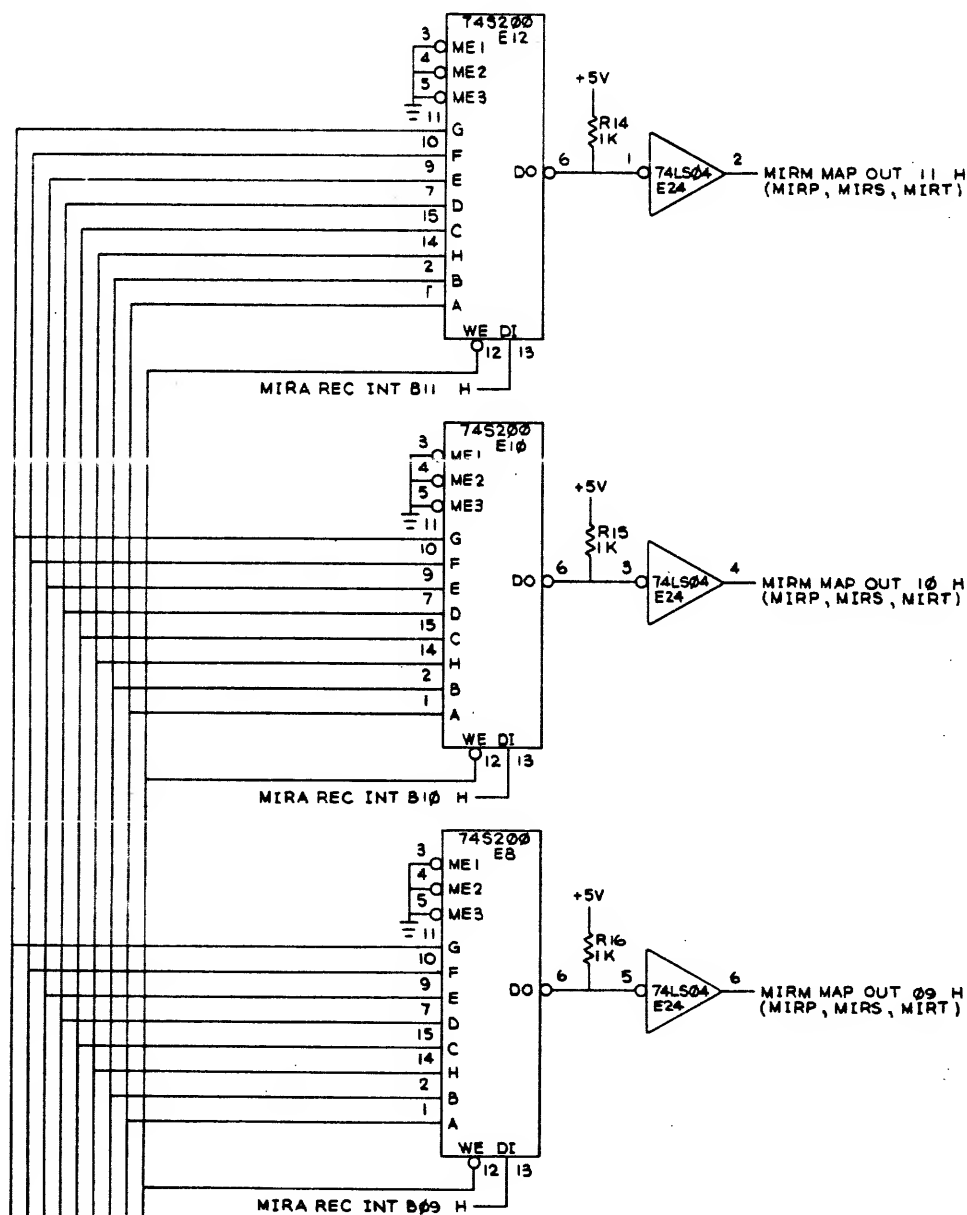
REVISIONS		
CHK	CHANGE NO.	REV.

(MAPPING REGISTER ( 17:12 ))										(SLOT 2)	
TITLE MBA INTERNAL REGISTERS (MIRL)					SIZE CODE D CS		NUMBER M8276 - Ø - 1			REV. D	
SCALE ———			SHEET 11 OF 20			DIST.					
2						TLC 1					



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MIRF RAM ADRS 7 L  
MIRF RAM ADRS 6 L  
MIRF RAM ADRS 5 L  
MIRF RAM ADRS 4 L  
MIRF RAM ADRS 3 L  
MIRF RAM ADRS 2 L  
MIRF RAM ADRS 1 L  
MIRF RAM ADRS 0 L  
MIRB MAP WE 2 L



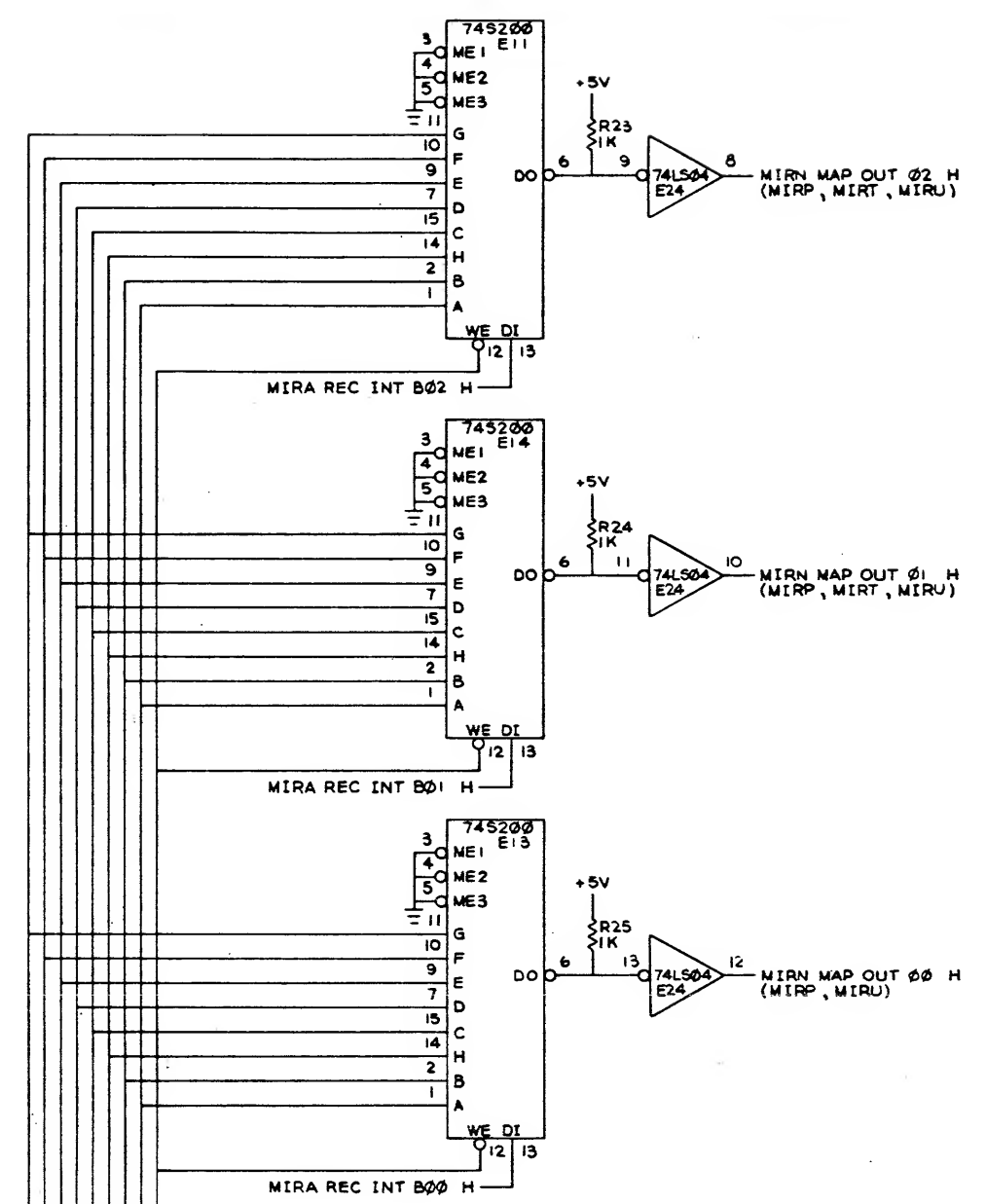
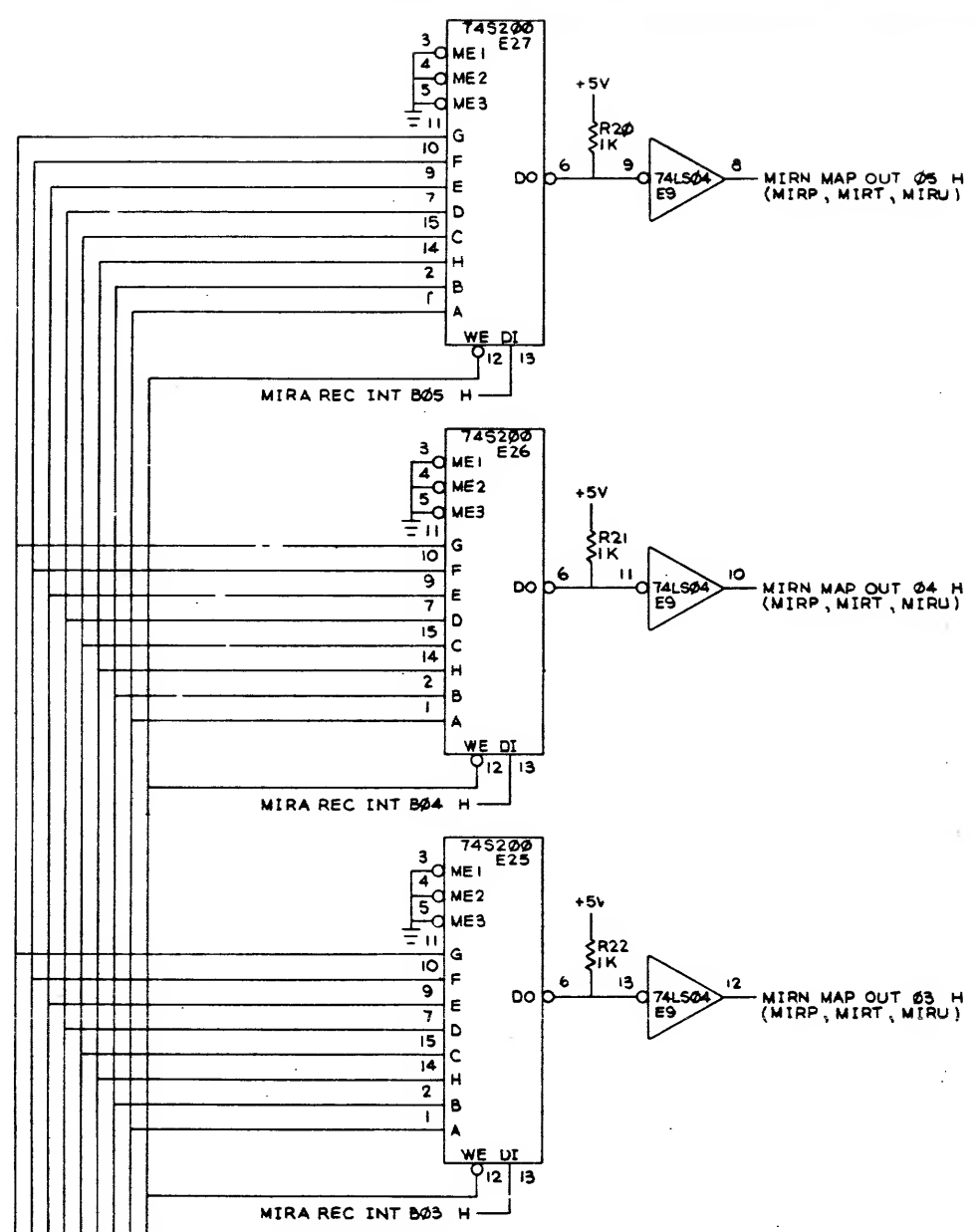
(MAPPING REGISTER (11:06))

(SLOT 2)

TITLE	SIZE/CODE	NUMBER	REV.
MBA INTERNAL REGISTERS (MIRM)	DCS	M8276-0-1	D
SCALE	SHEET 12 OF 20	DIST.	

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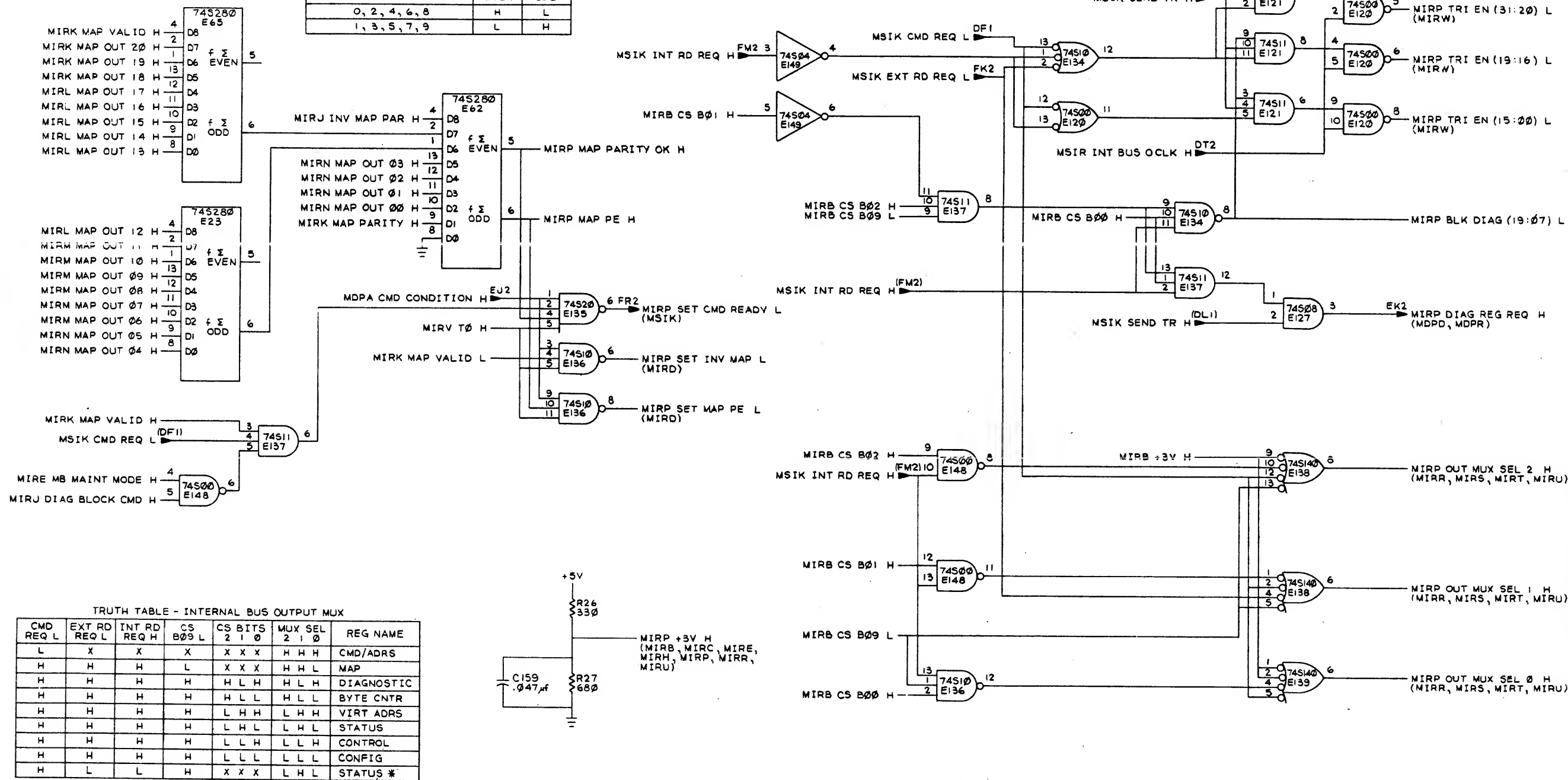
MIRF RAM ADRS 7 L  
MIRF RAM ADRS 6 L  
MIRF RAM ADRS 5 L  
MIRF RAM ADRS 4 L  
MIRF RAM ADRS 3 L  
MIRF RAM ADRS 2 L  
MIRF RAM ADRS 1 L  
MIRF RAM ADRS 0 L  
MIRB MAP WE 2 L



REVISIONS		
CHK	CHANGE NO.	REV.

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74S280			
NUMBER OF INPUTS HIGH		EVEN	ODD
0, 2, 4, 6, 8		H	L
1, 3, 5, 7, 9		L	H



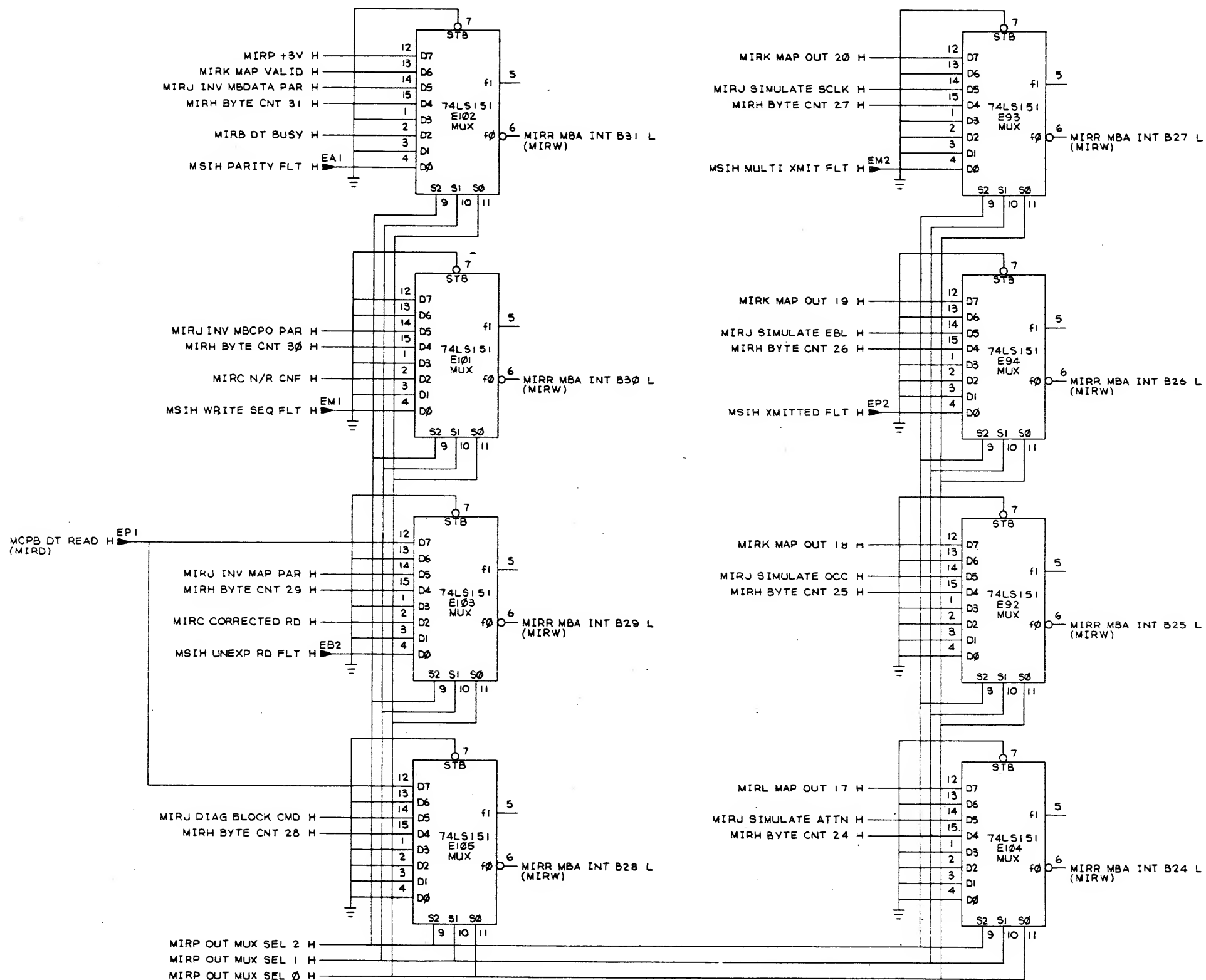
REVISIONS		
CHK	CHANGE NO.	REV.

(SLOT 2)  
(MAP PAR CHECK, OUTPUT MUX SEL AND ENAB)

TITLE	MBA INTERNAL REGISTERS (MIRP)	SIZE CODE	D CS	NUMBER	M8276-0-1	REV.	D
SCALE	+	SHEET	14 OF 20	DIST.			

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74LS151					
SEL 2	SEL 1	SEL 0	ENAB	f1	f0
X	X	X	H	L	H
L	L	L	L	D0	D0
L	L	H	L	D1	D1
L	H	L	L	D2	D2
L	H	H	L	D3	D3
H	L	L	L	D4	D4
H	L	H	L	D5	D5
H	H	L	L	D6	D6
H	H	H	L	D7	D7



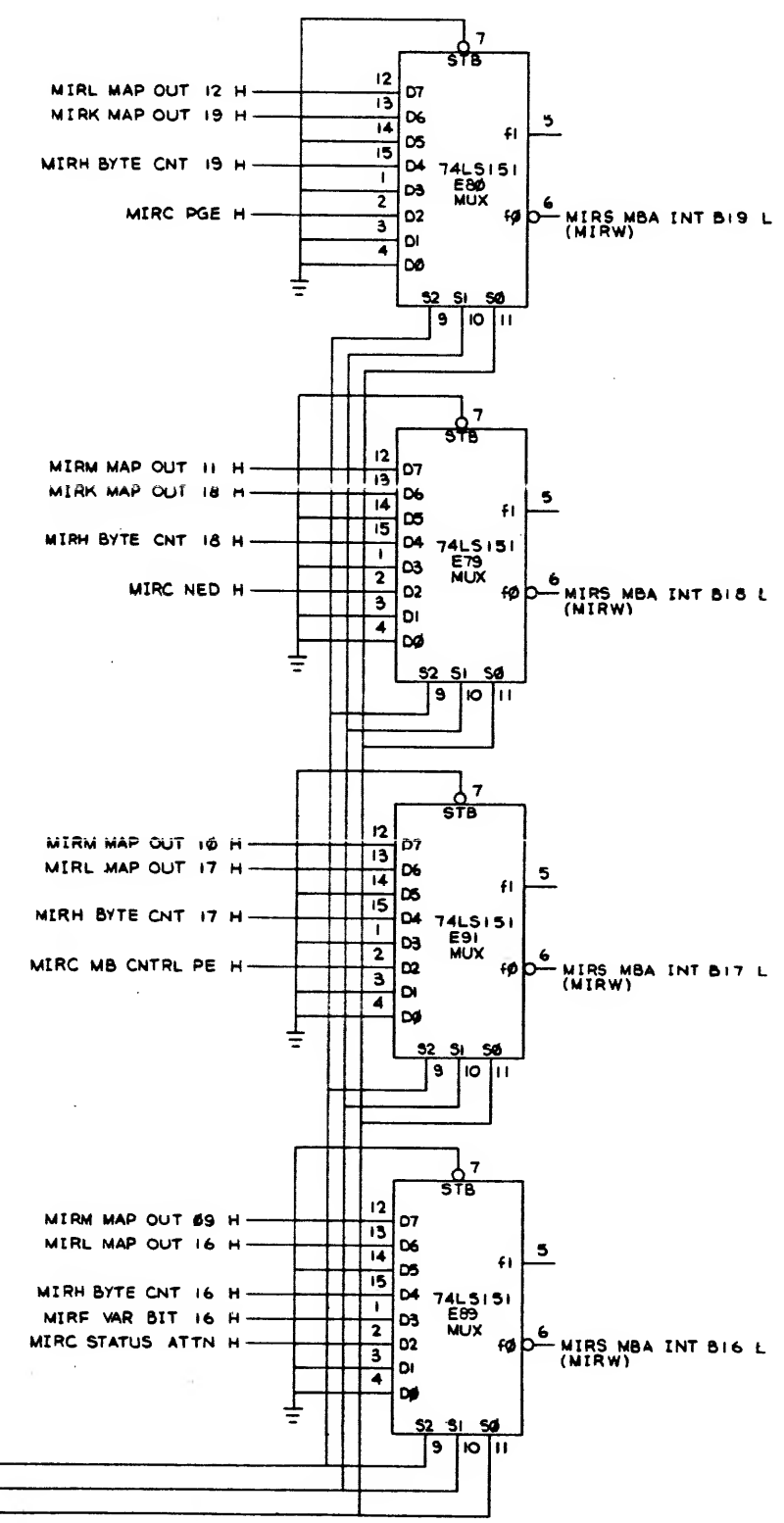
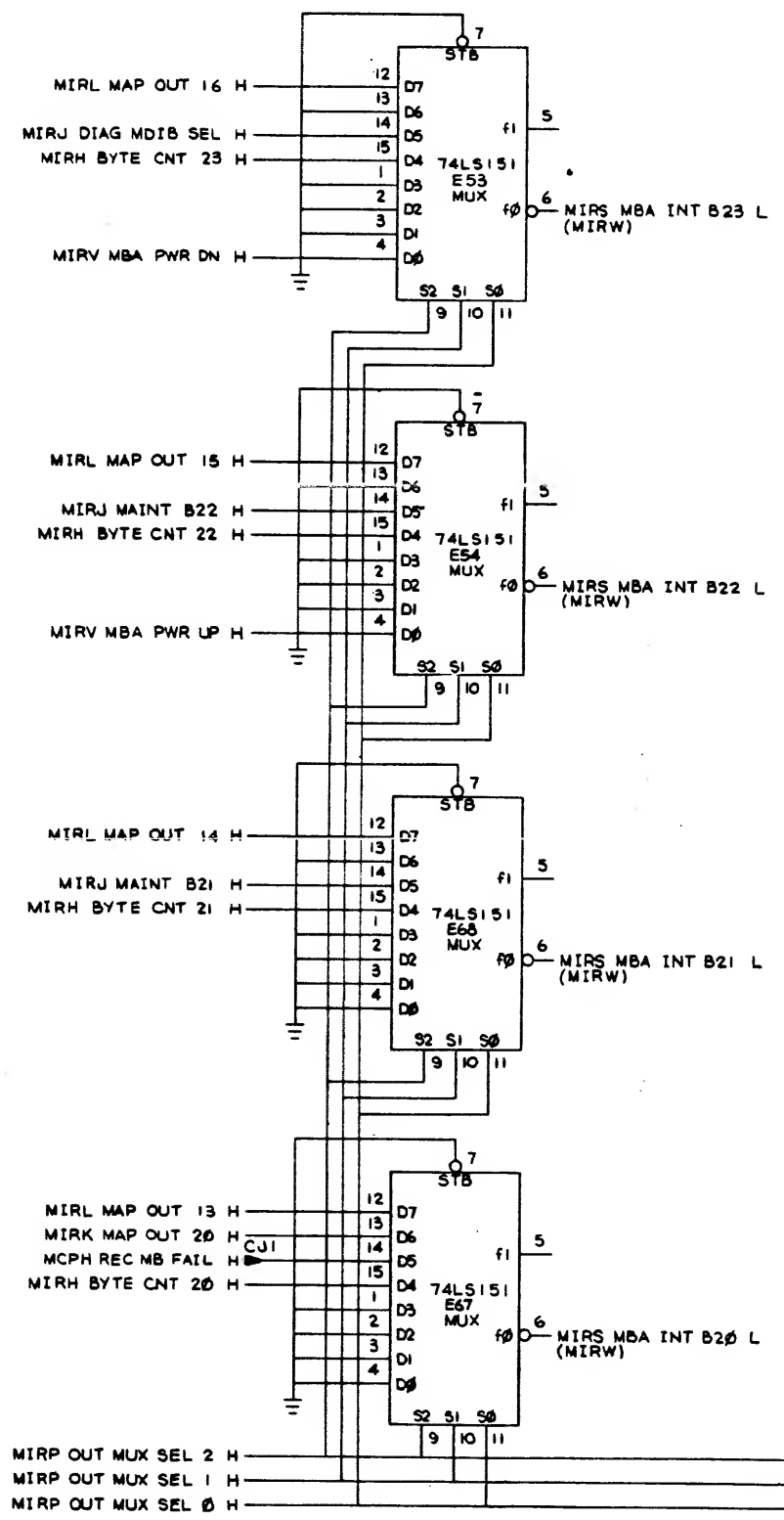
REVISIONS		
CHK	CHANGE NO.	REV.

(SLOT 2)

(INTERNAL BUS OUTPUT MUX (31:24))

TITLE	MBA INTERNAL REGISTERS (MIRR)	SIZE CODE	D CS	NUMBER	M8276-0-1	REV.	D
SCALE	1:1	SHEET	15 OF 20	DIST.			

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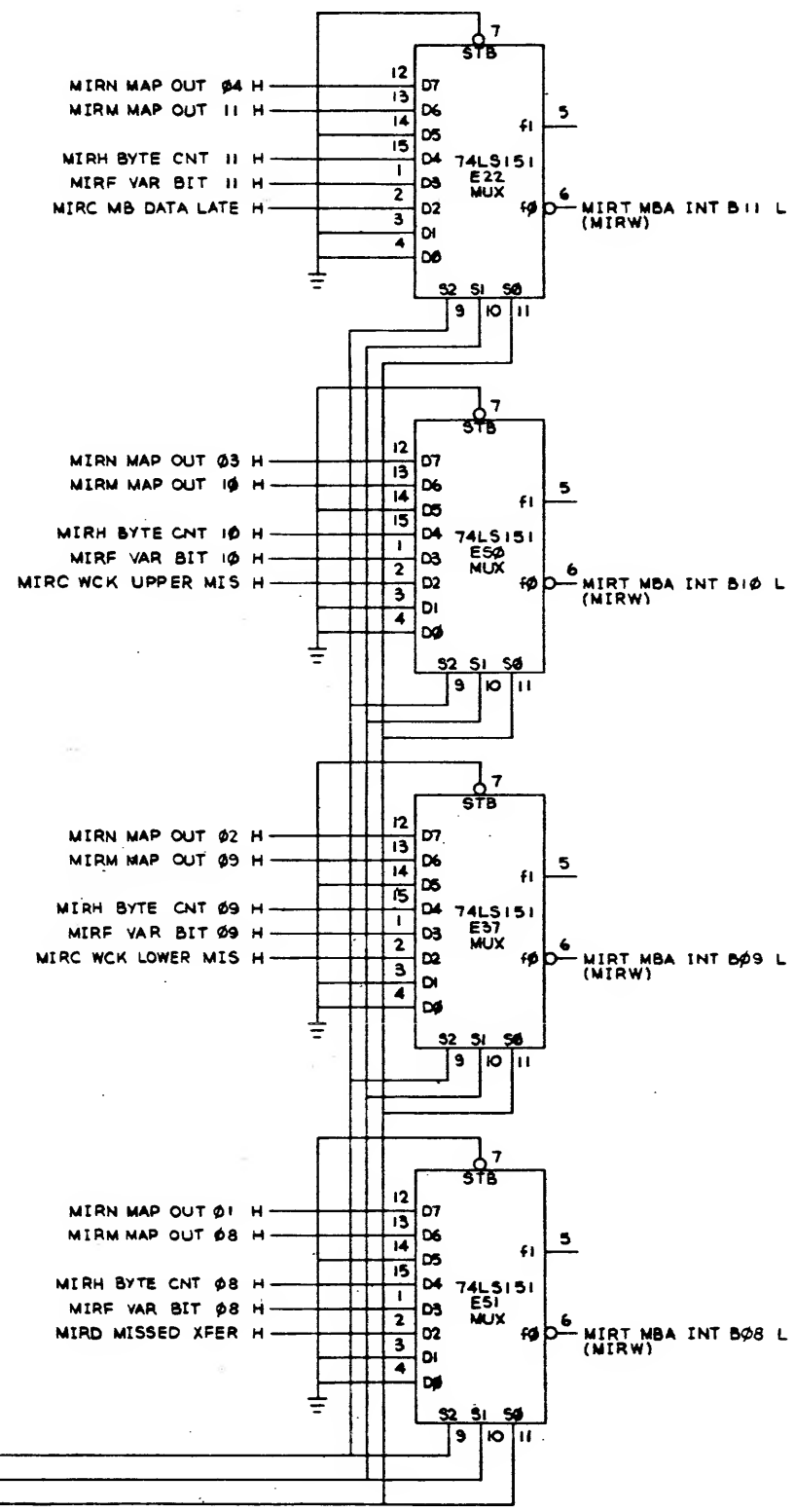
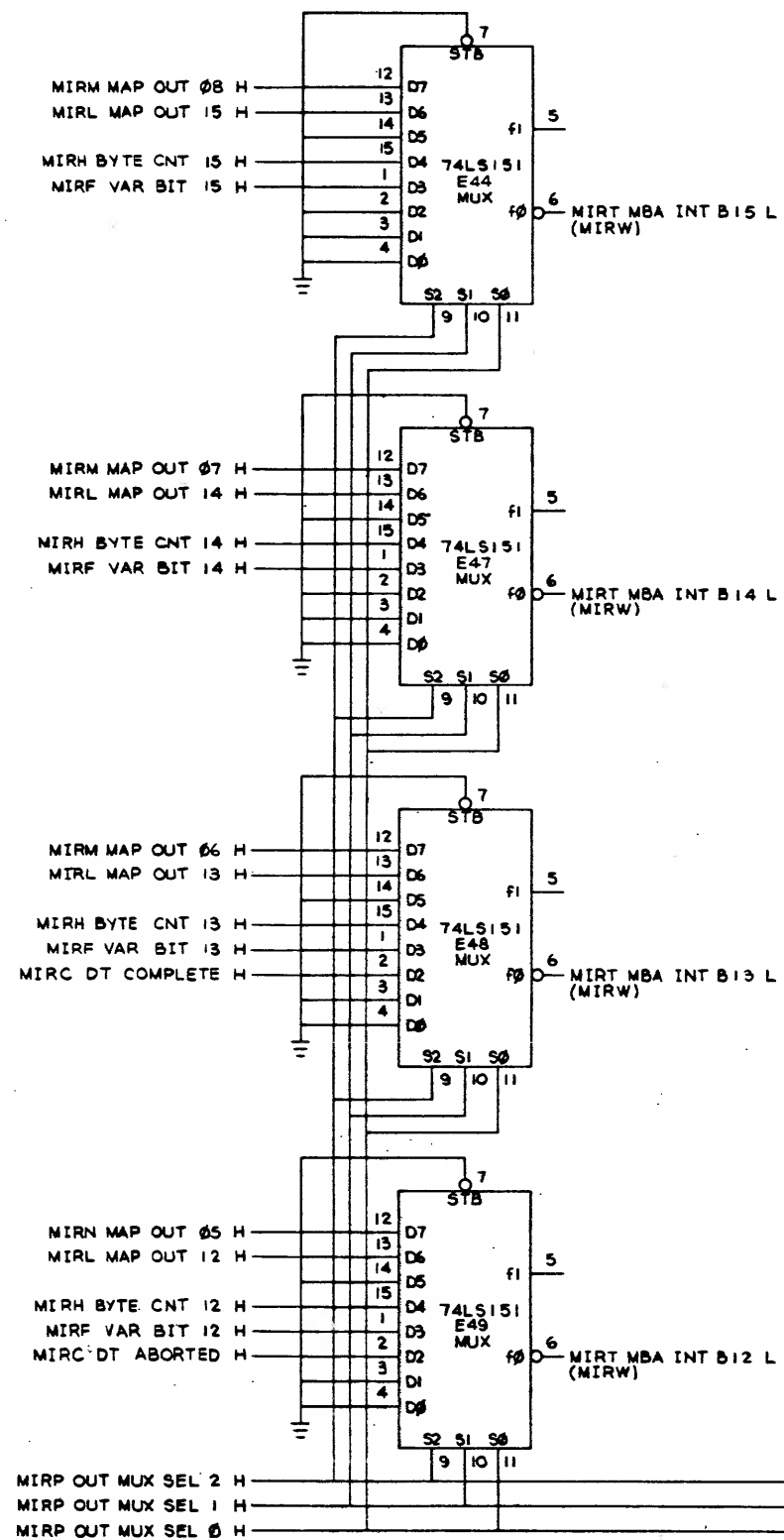
(INTERNAL BUS OUTPUT MUX (23:16)) (SLOT 2)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	MIRA INTERNAL REGISTERS (MIRS)	SIZE CODE	D CS	NUMBER	M8276-0-1	REV.	0
SCALE	1:1	SHEET	16 OF 20	DIST.			

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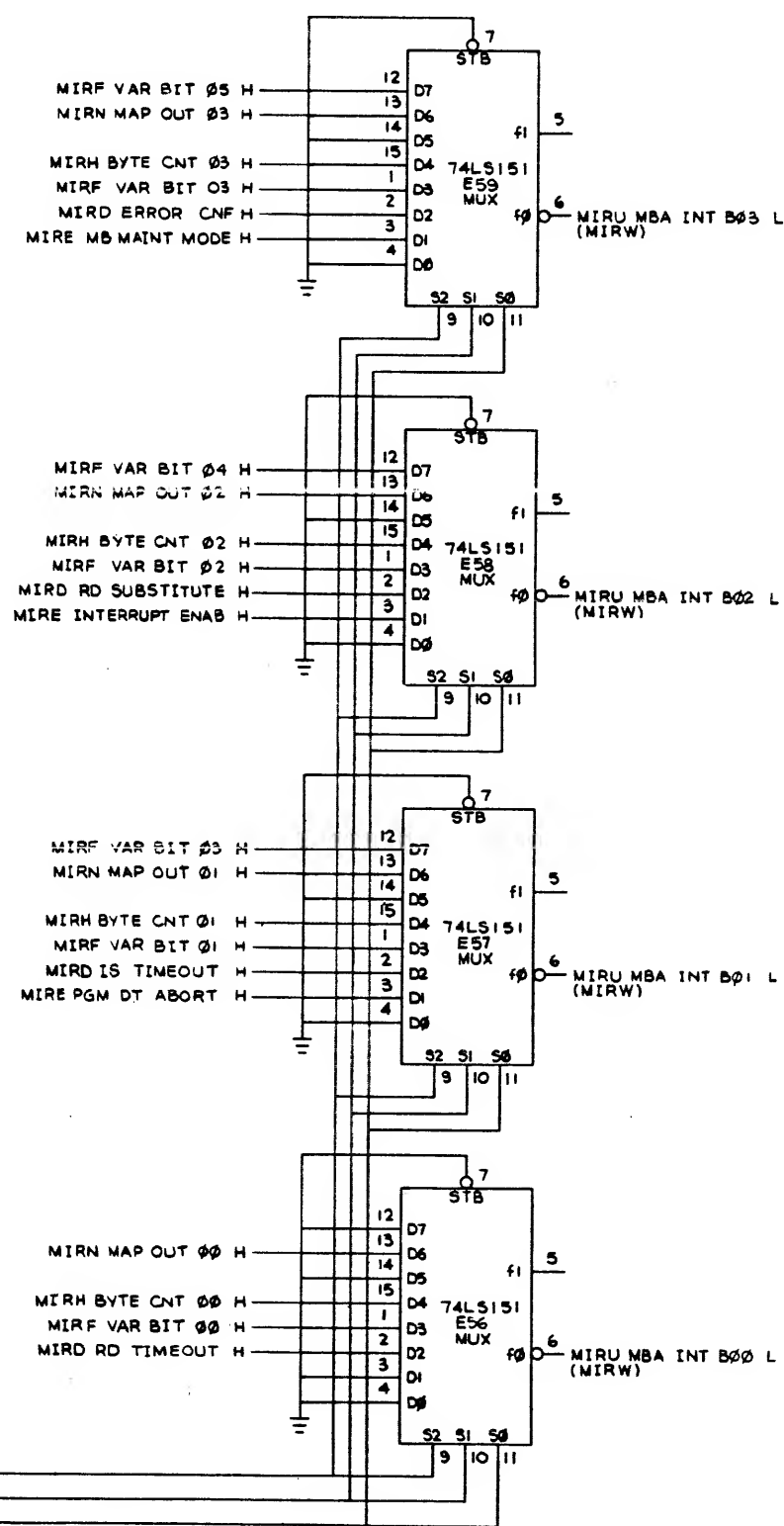
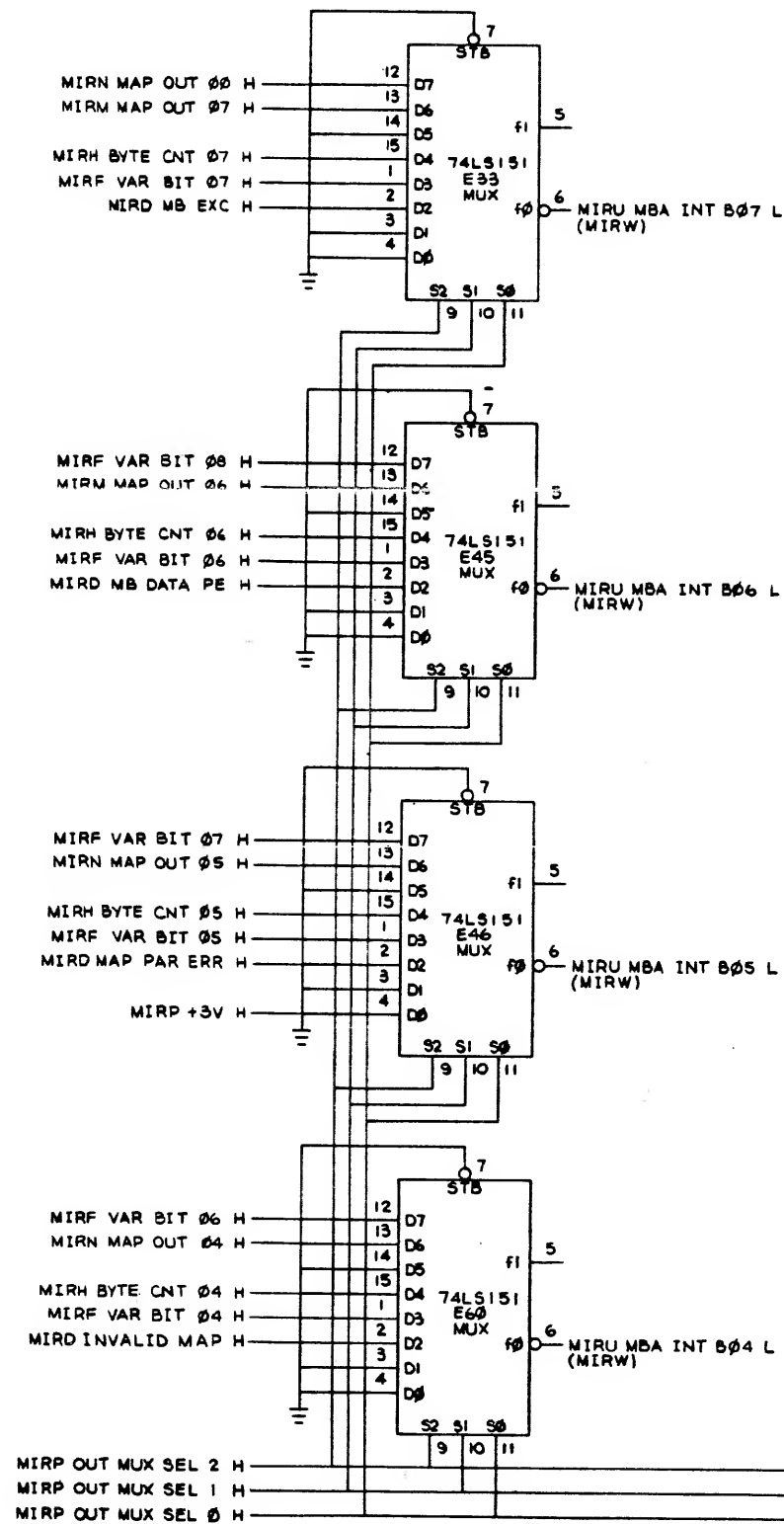
1-0-9228W 2



REVISIONS		
CHK	CHANGE NO.	REV.

(INTERNAL BUS OUTPUT MUX (15:08))		(SLOT 2)	
TITLE	MBA INTERNAL REGISTERS (MIR)	SIZE CODE	NUMBER
SCALE	1:1	SHEET	17 OF 20
DATE	1-0-9228W	DESIGN	1

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(INTERNAL BUS OUTPUT MUX (07:00))

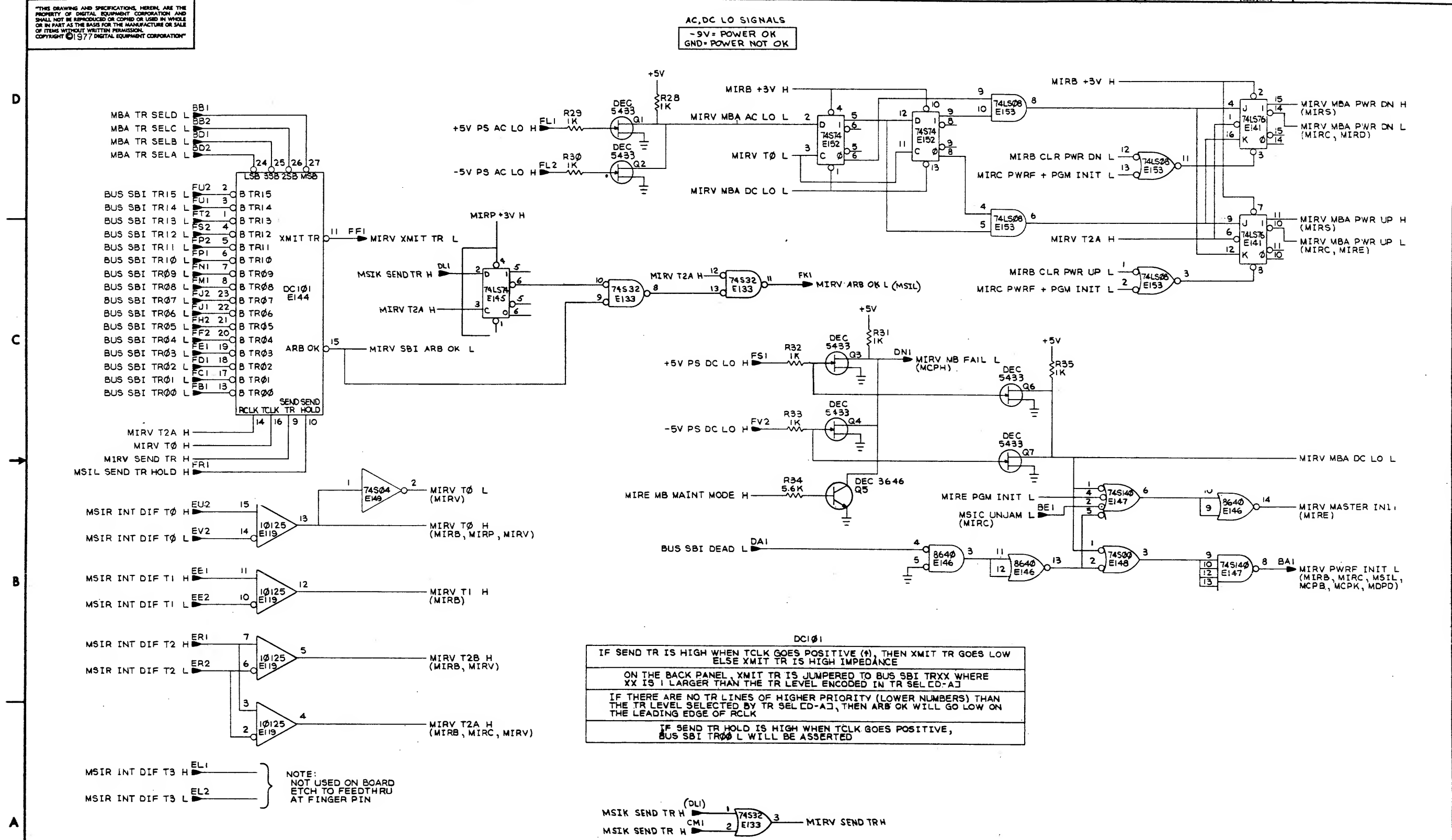
(SLOT 2)

REVISIONS			TITLE			NUMBER			REV.		
CHK	CHANGE NO.	REV.	MBA INTERNAL REGISTERS (MIRU)			DCS M8276-0-1			D		
SCALE	++		SHEET		18 OF 20		DIST.				

TW 1

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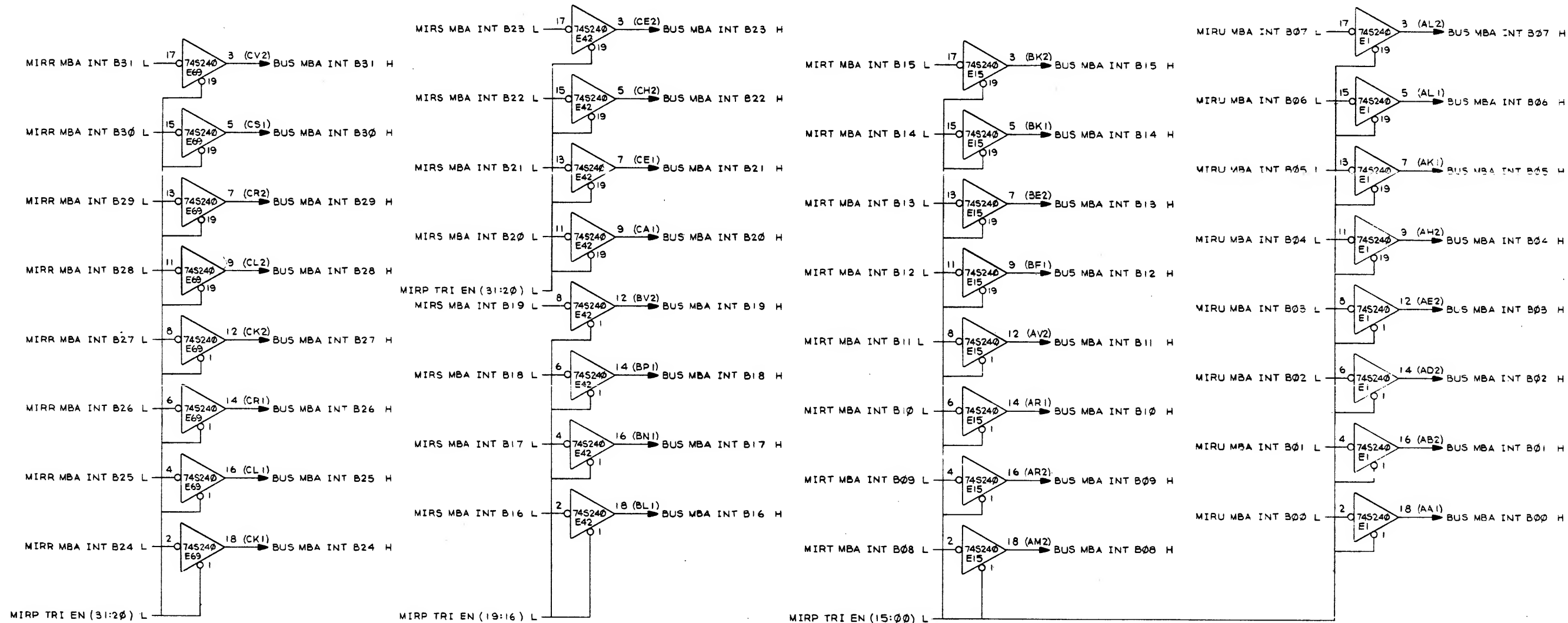
1-0-9228W 2



REVISIONS			TITLE		NUMBER		REV.	
CHK	CHANGE NO.	REV.	(SBI ARB, POWER FAIL, MIR CLOCKS)		MBA INTERNAL REGISTERS (MIRV)		D CS M8276-0-1	
8			7		6		5	
4			3		2		1	



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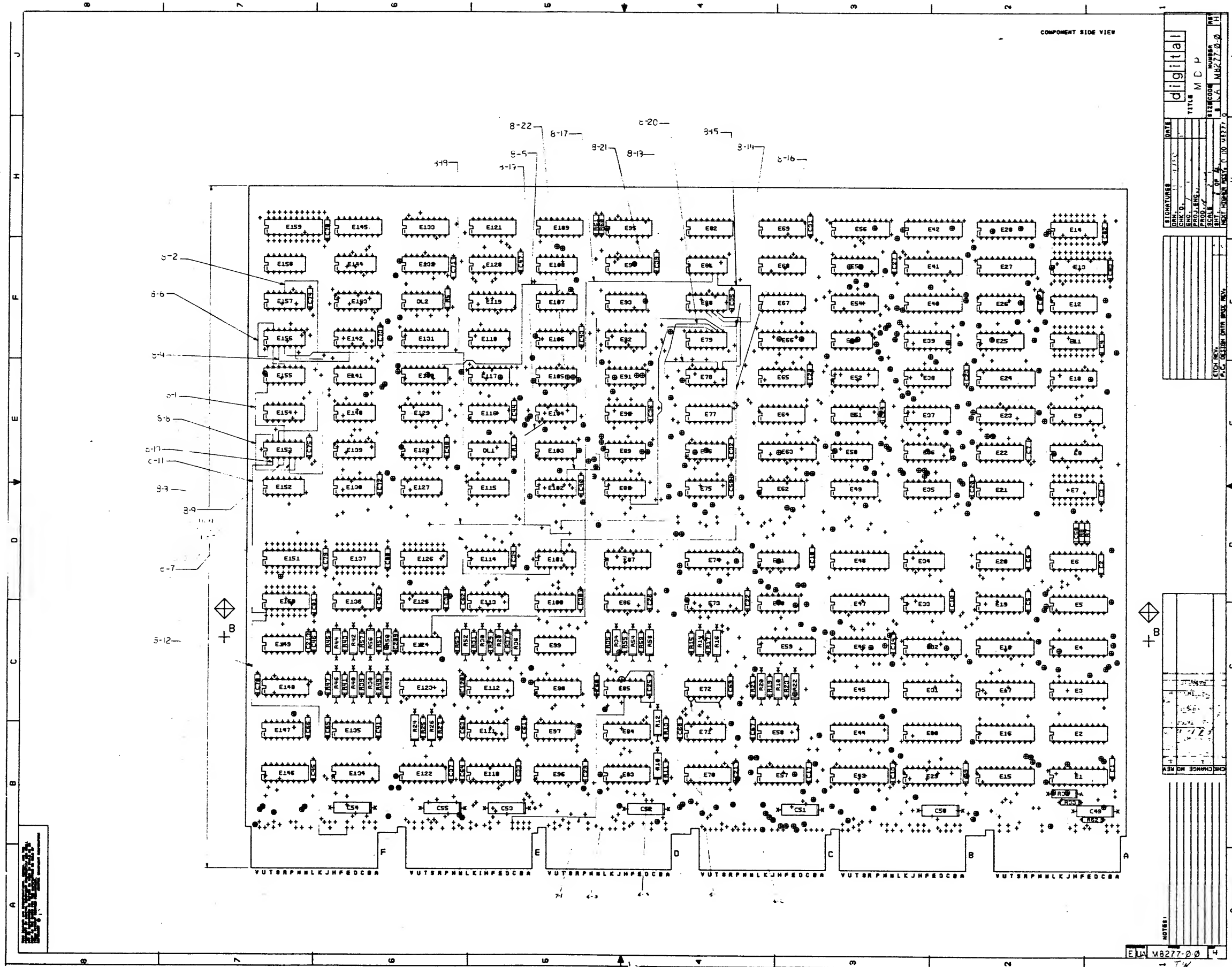


REVISIONS		
CHK	CHANGE NO.	REV.

(INT BUS DRIVER)

(SLOT 2)

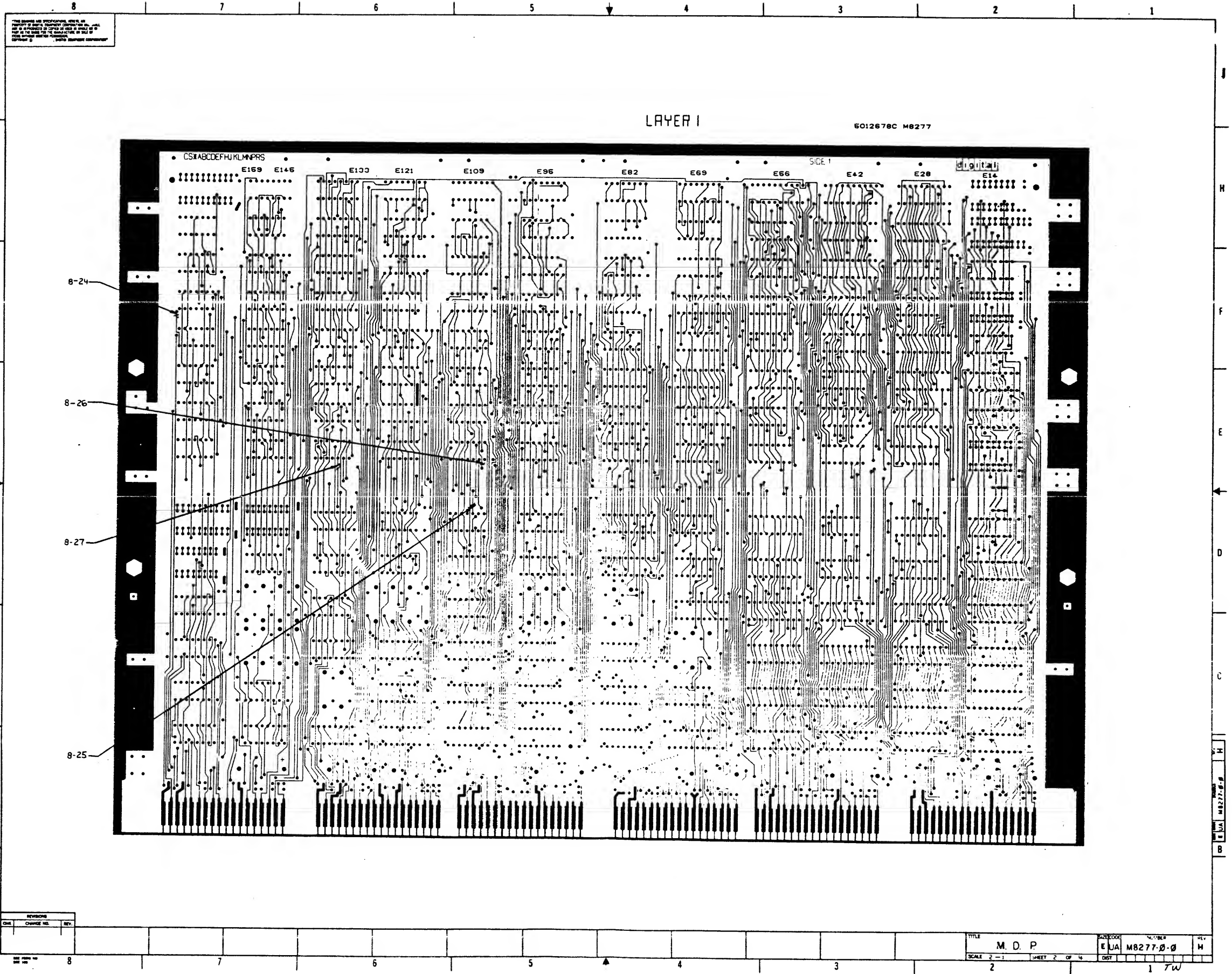
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MBA INTERNAL REGISTERS (MIRW)		D CS	M8276-0-1	D
SCALE	SHEET 20 OF 20	DIST.		

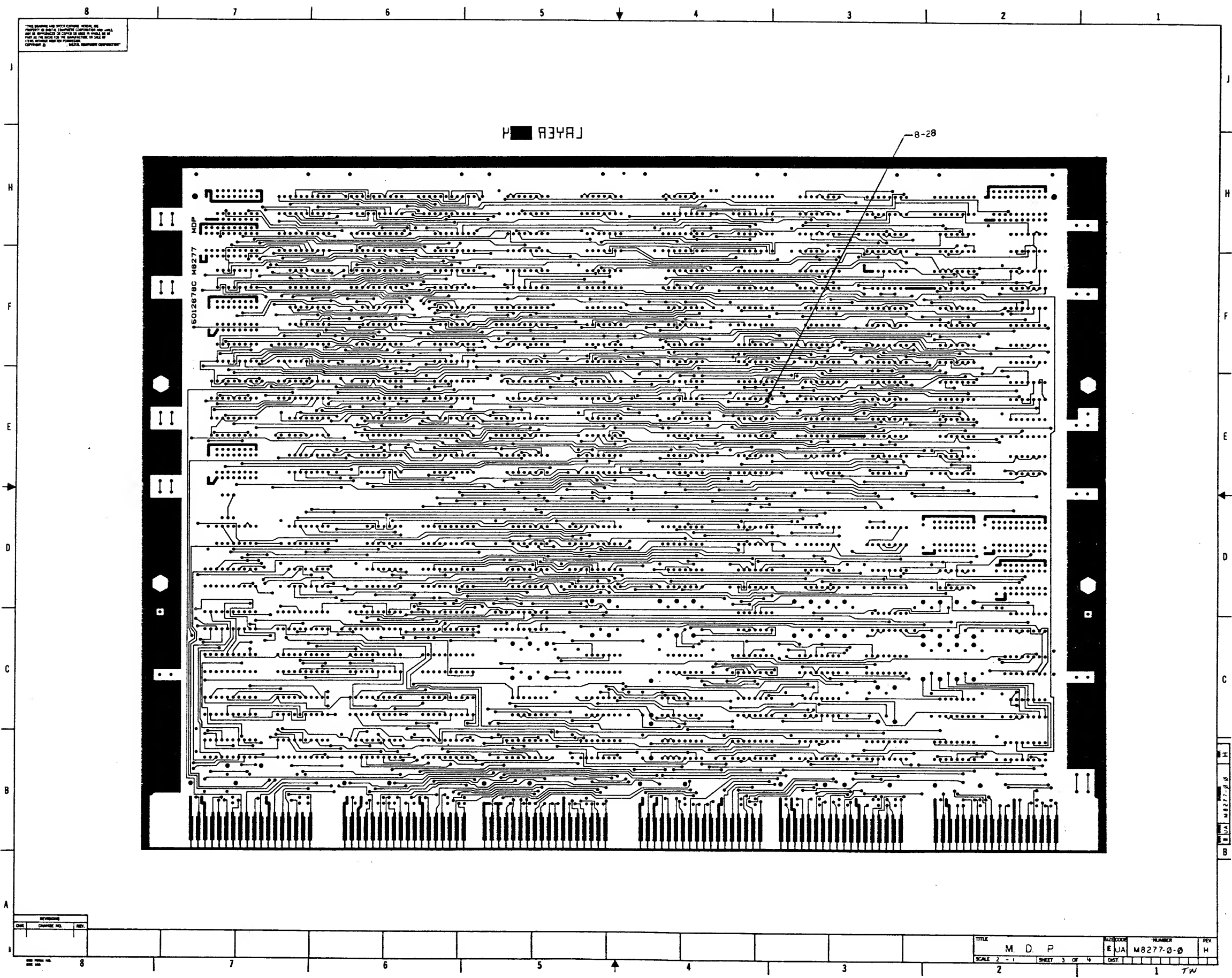


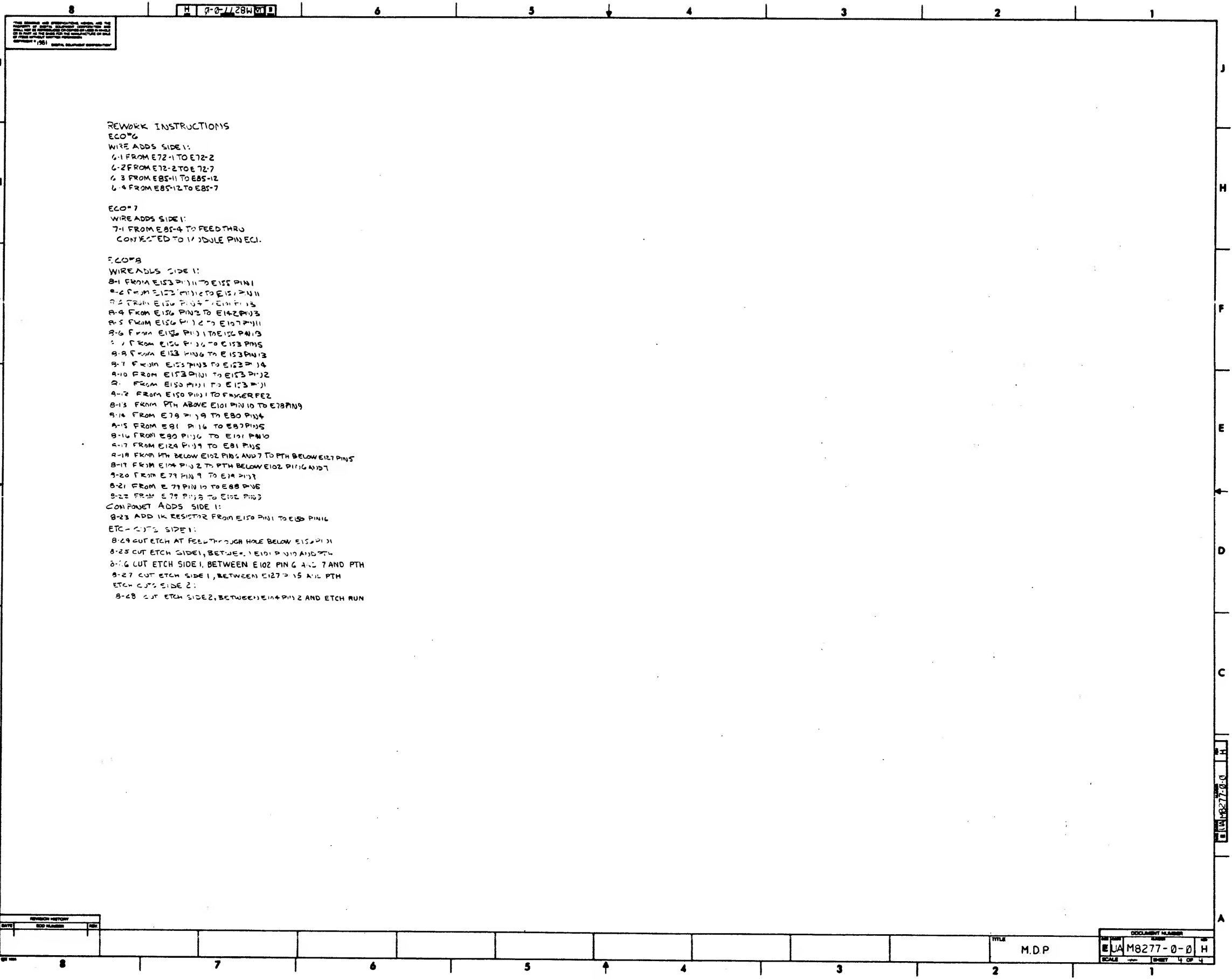
digital	
DATE	TITLE
DESIGNED BY	PROJECT
CHECKED BY	PROJ. ENG.
APPROVED BY	SCALE
ELECT. ENG. DATA SHEET NO. 1	

REVISION	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

NOTES
1. SEE DRAWING FOR DETAILS.
2. SEE DRAWING FOR DETAILS.
3. SEE DRAWING FOR DETAILS.
4. SEE DRAWING FOR DETAILS.
5. SEE DRAWING FOR DETAILS.
6. SEE DRAWING FOR DETAILS.
7. SEE DRAWING FOR DETAILS.
8. SEE DRAWING FOR DETAILS.
9. SEE DRAWING FOR DETAILS.
10. SEE DRAWING FOR DETAILS.







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REWORK INSTRUCTIONS

ECO#6  
WIRE ADDS SIDE 1:  
6-1 FROM E72-1 TO E72-2  
6-2 FROM E72-2 TO E72-7  
6-3 FROM E85-11 TO E85-12  
6-4 FROM E85-12 TO E85-7

ECO#7  
WIRE ADDS SIDE 1:  
7-1 FROM E85-4 TO FEEDTHRU  
CONNECTED TO 17 DOUBLE PIN ECI.

ECO#8  
WIRE ADDS SIDE 1:  
8-1 FROM E153 PIN11 TO E155 PIN1  
8-2 FROM E153 PIN12 TO E151 PIN11  
8-3 FROM E156 PIN4 TO E141 PIN13  
8-4 FROM E156 PIN3 TO E142 PIN3  
8-5 FROM E156 PIN2 TO E107 PIN11  
8-6 FROM E156 PIN1 TO E156 PIN3  
8-7 FROM E156 PIN4 TO E153 PIN3  
8-8 FROM E153 PIN3 TO E153 PIN13  
8-9 FROM E153 PIN3 TO E153 PIN14  
8-10 FROM E153 PIN1 TO E153 PIN12  
8-11 FROM E150 PIN1 TO E153 PIN1  
8-12 FROM E150 PIN1 TO FINGER FE2  
8-13 FROM PTH ABOVE E101 PIN10 TO E78 PIN9  
8-14 FROM E79 PIN9 TO E80 PIN4  
8-15 FROM E81 PIN16 TO E87 PIN3  
8-16 FROM E80 PIN6 TO E101 PIN10  
8-17 FROM E124 PIN9 TO E81 PIN3  
8-18 FROM PTH BELOW E102 PIN4 AND 7 TO PTH BELOW E102 PIN3  
8-19 FROM E104 PIN2 TO PTH BELOW E102 PIN3 AND 7  
8-20 FROM E79 PIN9 TO E14 PIN11  
8-21 FROM E79 PIN10 TO E88 PIN3  
8-22 FROM E79 PIN3 TO E102 PIN3  
CONFORET ADDS SIDE 1:  
8-23 ADD 1K RESISTOR FROM E150 PIN1 TO E80 PIN16  
ETC - CUTS SIDE 1:  
8-24 CUT ETCH AT FEEDTHRU HOLE BELOW E156 PIN11  
8-25 CUT ETCH SIDE 1, BETWEEN E101 PIN10 AND PTH  
8-26 CUT ETCH SIDE 1, BETWEEN E102 PIN4 AND 7 AND PTH  
8-27 CUT ETCH SIDE 1, BETWEEN E102 PIN3 AND PTH  
ETCH CUTS SIDE 2:  
8-28 CUT ETCH SIDE 2, BETWEEN E104 PIN2 AND ETCH RUN

REVISION HISTORY		
DATE	ECO NUMBER	BY

TITLE  
M.D.P

DOCUMENT NUMBER		

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
					00	
1	1	D-MD-5012678-0-0	5012678-00	MDP	1	
2	2		1012784-00	.047 MFD 50V +80-20% CER	70	C1-C10,C13,C14,C17,C18,C20-C48, C58-C69,C70-C75,C78-C83,C120, C209,C213 C49-C55 R1,R5
3	3		1012084-01	8 MFD 25V +75-10% AL EL	7	
4	4		1300271-00	220.0 .25 W 5.0 % CC	2	
5	5		1210711-02	/REPLACED BY 12-16988-02	1	
6	6		9000024-01	EYELET,ROLL FLANGE .1210DX .192	12	
7	7		1300295-00	330.0 .25 W 5.0 % CC	2	R7,R60
8	8		1301424-00	680.0 .25 W 5.0 % CC	2	R8,R61
9	9		1611300-00	DELAY= 10-125NS,5TAPS FAST RISE	2	DL1,DL2
10	10		1910532-00	74S00 NAND GATE-QUAD 2IN	7	E80,E90,E91,E104,E114,E125,E140
11	11		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	2	E101,E153
12	12		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	2	E89,E107
13	13		1910534-00	74S04 INVERTER GATE-HEX 1I	3	E78,E81,E117
14	14		1912803-00	74LS04 INVERTER GATE,HEX	2	E86,E106
15	15		1912389-00	74S08 AND GATE-QUAD 2IN,PO	3	E75,E92,E105
16	16		1912805-00	LS08 AND GATE-QUAD 2IN,PO	2	E79,E144
17	17		1910536-00	74S10 NAND GATE-TRIPLE 3IN	2	E108,E141
18	18		1912807-00	LS10 NAND GATE-TRIPLE 3IN	1	E139
19	19		1910537-00	74S11 AND GATE-TRIPLE 3INP	3	E102,E118,E34
20	20		1912808-00	LS11 AND GATE-TRIPLE 3IN	2	E155,E138
21	21		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E127
22	22		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	1	E158
23	23		1912820-00	LS51 A-O-I GATE 2-WIDE 2I	1	E115
24	24		1910542-00	74S64 A-O-I GATE 4-2-3-2	5	E100,E113,E136,E152,E157
25	25		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	5	E88,E93,E103,E128,E142
26	26		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	2	E154,E156
27	27		1912825-00	LS76 FF-JK DUAL W/PRESET	4	E120,E121,E131,E132
28	28		1912089-00	74S85 CMPRTR-4BIT MAGNITUD	4	E62,E64,E65,E77

REVISION HISTORY			BASIC PART NO: M8277			DRN: K.FRIEDGEN			DATE: 11-SEP-79			D I G I T A L		
ENG	ECO NUMBER	REV	SECTION A OF A			CHK'D: F.SMART			DATE: 11-SEP-79			TITLE PARTS LIST		
---	INITIAL	D	SECTION VARIATION INDEX			DES.ENG: K.OKIN			DATE: 11-SEP-79			DOCUMENT NUMBER		
J.F	000006	E	[A] 00			RESP.ENG.: K.OKIN			DATE: 11-SEP-79			SIZE CODE NUMBER REV		
R.C	M8277-TW007	F	[B]			MFG.ENG.: M.TERELLA			DATE: 11-SEP-79			K PL M8277-0-DBP H		
D.R	M8277-TW008	H	[C]			ASSEMBLY NUMBER:			TOP DOCUMENT NUMBER:			FILE NAME:		
			[D]			ID-UA-M8277-0-0			ID-DD-M8277-0-0			Z0649.PLS		
			[E]											
			[F]											
			[G]											
			[H]											
			[I]											
			[J]											
			[K]											
			[L]											
			[M]											
			[N]											

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TW

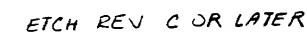
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29	29		1910545-00	74S112 FF-JK DUAL,EDGE TRIG	1		E143
30	30		1911712-00	74S51 AND-OR GATE-INVERT D	1		E76
31	31		1911675-00	74S138 DECODER/DEMUX 3-8 LIN	1		E19
32	32		1912843-00	LS139 DECODER, 2 OF 4(DUAL	1		E145
33	33		1910546-00	74S140 NAND GATE-DUAL 4INPU	3		E33,E116,E129
34	34		1912844-00	LS151 MUX 1 OF 8 & DATA	1		E130
35	35		1910547-00	74S153 MUX 1 OF 4 (DUAL)	9		E25,E36,E37,E38,E39,E52,E54,E55,
						CONT	E133
36	36		1910549-00	74S158 MUX 1 OF 2 (QUAD)	10		E10,E12,E21,E22,E26,E35,E49,E51,
						CONT	E68,E126
37	37		1910957-00	74S175 FF-D QUAD COMMON CLO	1		E20
38	38		1912853-00	LS175 FF-D QUAD	1		E109
39	39		1912854-00	LS193 COUNTER,SYNCHR,4BIT,	6		E67,E69,E82,E6,E94,E95
40	40		1913462-00	74S240 OCTAL BUFFER,INVERTI	4		E4,E18,E32,E46
41	41		1913493-00	74S241 OCTAL BUFFER,TRI-STA	2		E5,E59
42	42		1912860-00	LS259 LATCH 8BIT	1		E119
43	43		1911573-00	74S280 PARITY GEN/CHKR,9BIT	4		E50,E53,E60,E61
44	44		1913670-00	74S373 LATCH 8BIT TRASP TR	10		E23,E24,E27,E28,E40,E41,E42,E56,
						CONT	E73,E74
45	45		1913671-00	74S374 FF-D OCTAL TRISTATE	16		E1-E3,E15-E17,E29-E31,E43-E45,
						CONT	E47,E48,E63,E66
46	46		1910268-00	DEC 75107B RECEIVER,LINE,DUAL,	11		E58,E71,E72,E85,E97,E99,E135,
						CONT	E111,E124,E147,E149
47	47		1911341-00	75113 DRIVER,LINE,DUAL,MA	12		E57,E70,E83,E84,E96,E98,E110,
						CONT	E112,E123,E134,E146,E148
48	48		1911415-00	10125 ECL TO TTL TRNSLTR	1		E122
49	49		1912586-00	DM 85S68N REGISTER,64BIT EDGE	2		E8,E9
50	50		1300365-00	1.0 K .25 W 5.0 % CC	2		R62,R63
51	51		1301477-00	82.0 .25 W 5.0 % CC	25		R11,R13,R15,R17,R19,R21,R23,R25,
						CONT	R27,R29,R31,R33,R35,R37,R39,R41,
						CONT	R43,R45,R47,R49,R51,R53,R55,R57,
						CONT	R59
52	52		1301781-00	82.0 .50 W 5.0 % CC	25		R12,R14,R16,R18,R20,R10,R22,R24,
						CONT	R26,R28,R30,R32,R34,R36,R38,R40,
						CONT	R42,R44,R46,R48,R50,R52,R54,R56,
						CONT	R58
53	53		9105740-55	WIRE(WRAP)30AWG UL1423	A/R		

54 NOTE: I.C. SPARE LOCATIONS ARE; E7,E13,E14,E137,E150,E151,E159,E87,E11.

D	I	G	I	T	A	L	TITLE	SECTION A	OF A	SIZE	CODE	DOCUMENT NUMBER	REV
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										K	PL	M8277-0-DBP	H

TW





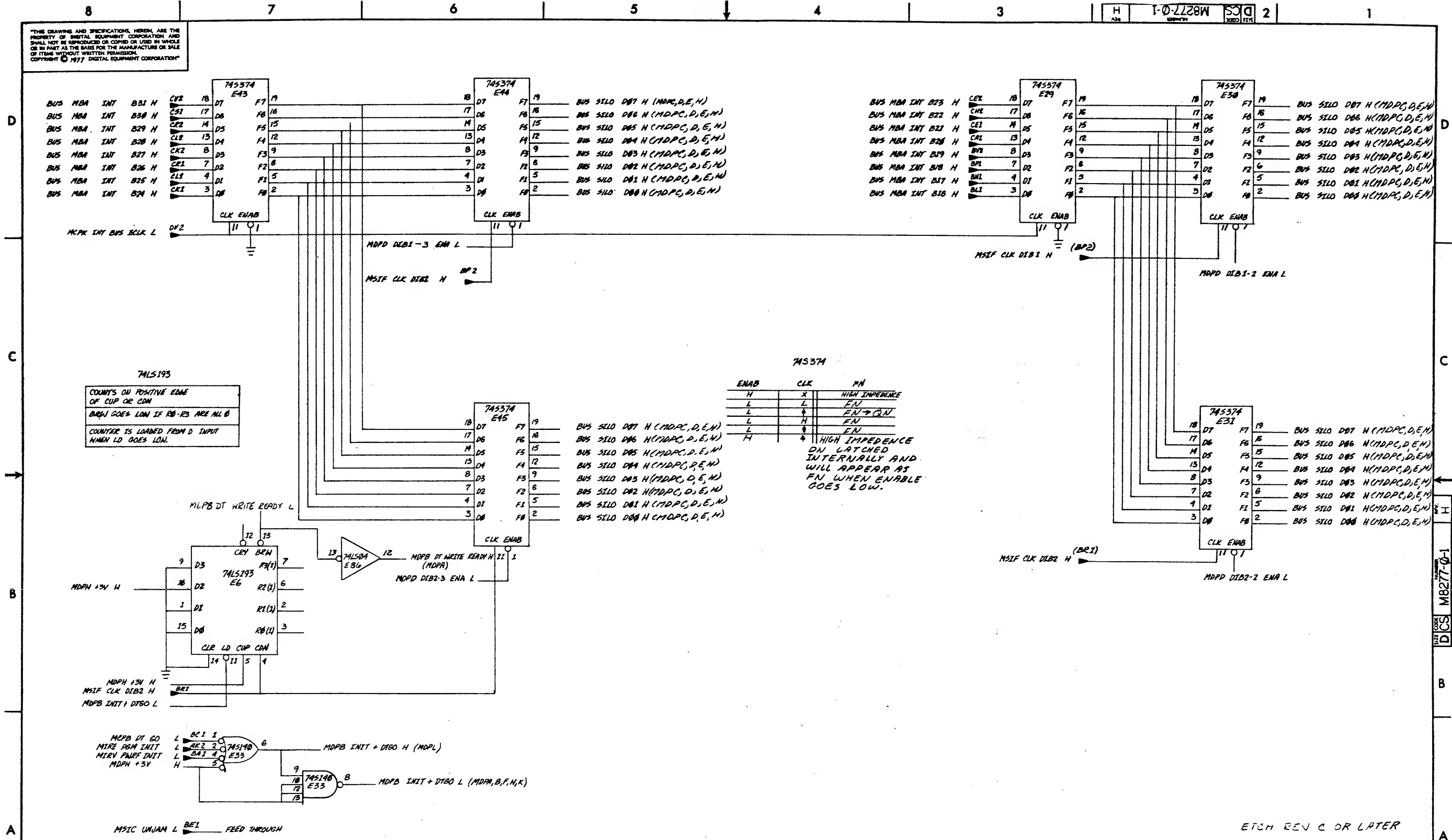
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CHK'D <i>by person</i>	<i>11-15-77</i>	TITLE	MASSBUS (MDP)	
ENG. <i>in the file</i>	<i>11-15-77</i>	DATA PATHS		
PROJ. <i>eng in the file</i>	<i>11-15-77</i>			
PROD <i>plant file</i>	<i>11-15-77</i>			
NEXT HIGHER ASSY.				
SCALE	<i>1</i>	SIZE D	CODE CS	NUMBER M8277-0-1
SHEET	<i>1 OF 20</i>	DIST.		REV. H

REVISIONS		CHK	CHANGE NO.	REV.
1	WPK		MS277-0004A	D
2	JP		MS277-TW006	E
3	B		5 SEP 78	
		B. SHORT		
		10/21/81		
4	HD		MS277-TW007 F	
		10/21/81		
5	D		CHUMSAE 17 MAR 81	
		R CHUMSAE		
		11/26/81		
6	HD		MS277-TW008 H	
		11/26/81		
7	D		RAINVILLE 01 MAR 81	
		11/26/81		





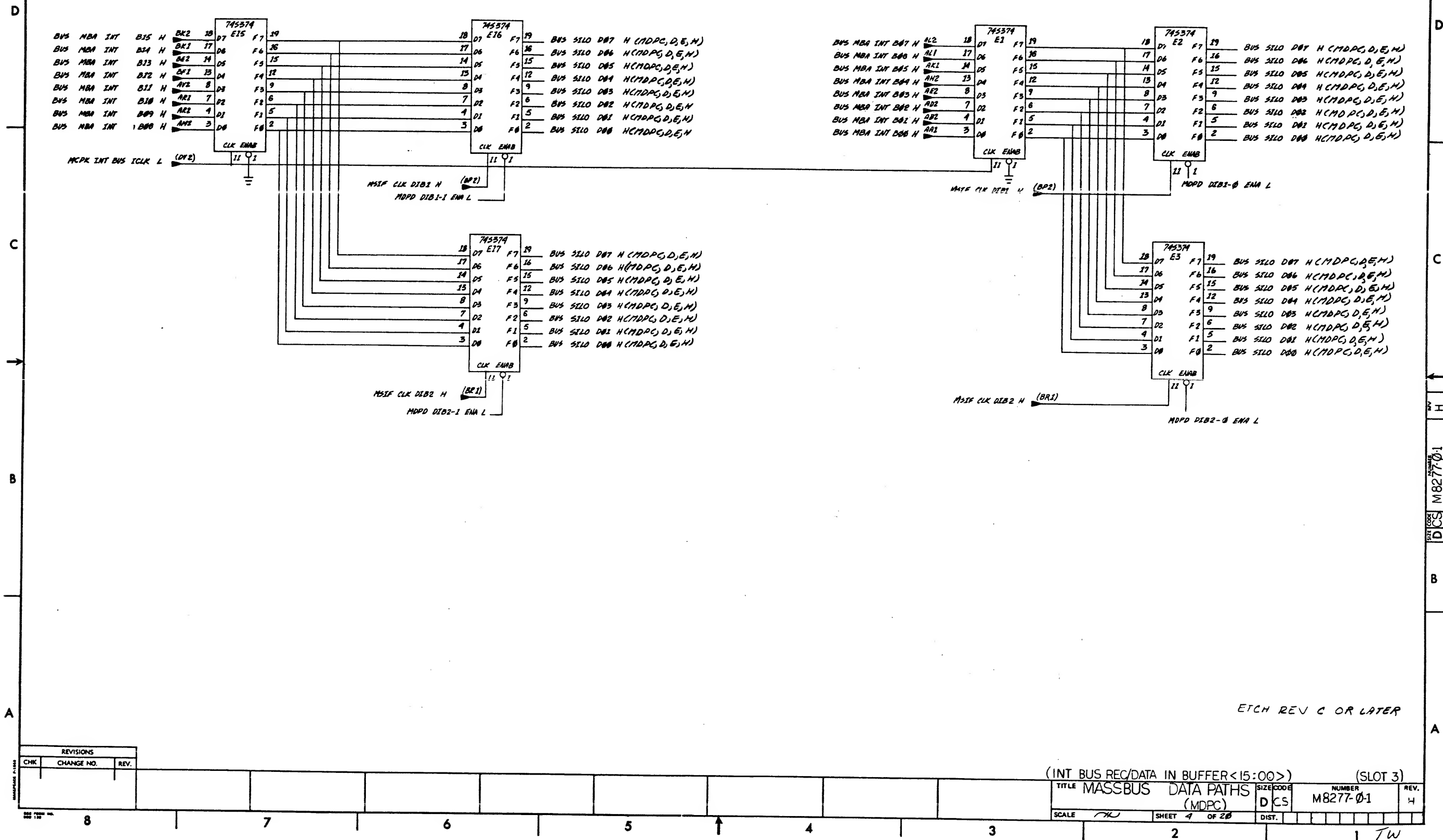
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REVISIONS		
CHK	CHANGE NO.	REV.

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H REV. 1 M8277-01 DCS 2 1



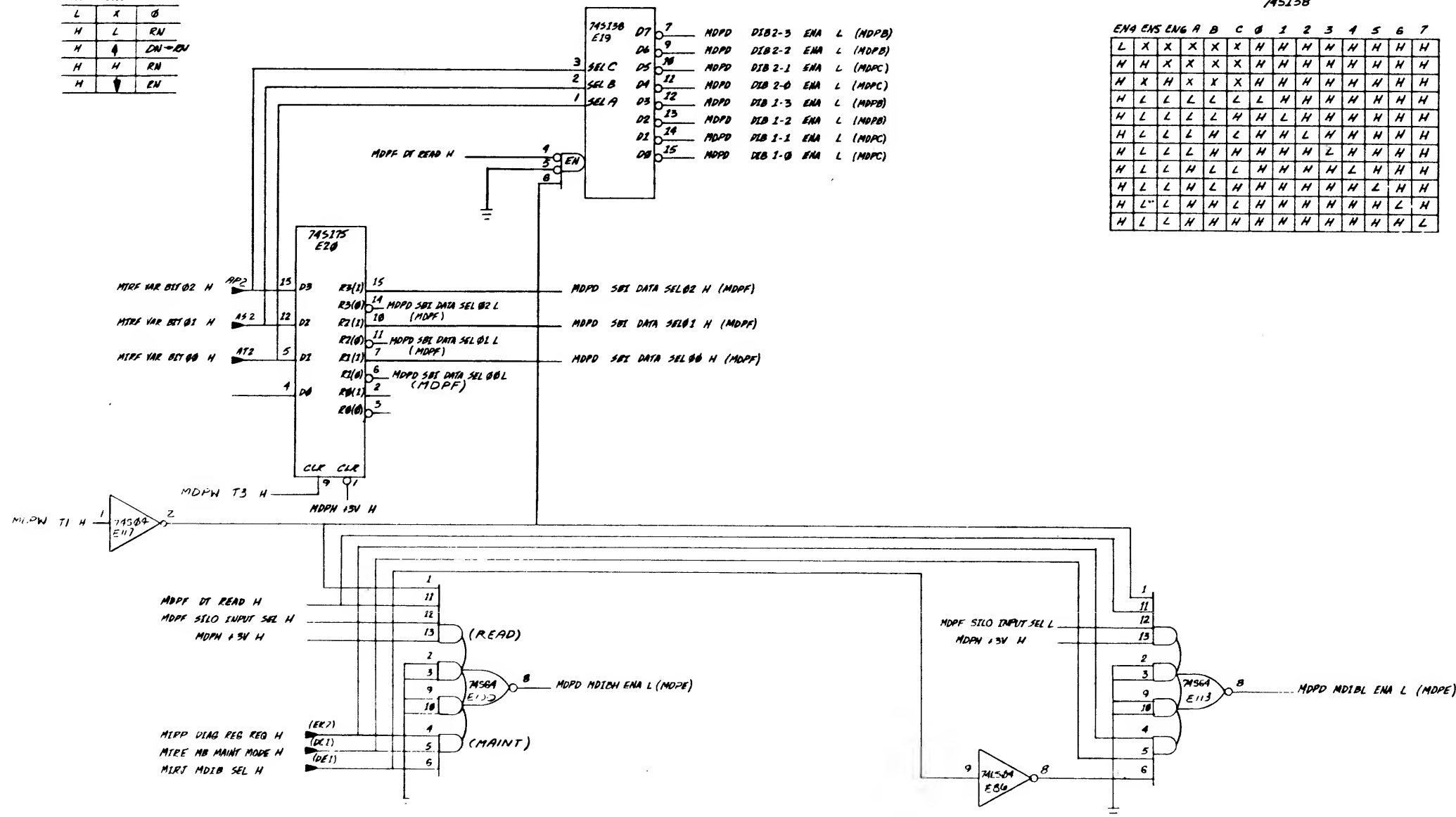
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74S175

CLR	CLK	EN
L	X	0
H	L	RN
H	↓	DN→DU
H	H	RN
H	↓	EN

74S138

EN4	EN5	EN6	A	B	C	0	1	2	3	4	5	6	7
L	X	X	X	X	X	X	H	H	H	H	H	H	H
H	H	X	X	X	X	X	H	H	H	H	H	H	H
H	X	H	X	X	X	X	H	H	H	H	H	H	H
H	L	L	L	L	L	L	H	H	H	H	H	H	H
H	L	L	L	L	L	H	H	L	H	H	H	H	H
H	L	L	L	H	L	H	H	L	H	H	H	H	H
H	L	L	L	H	H	H	H	L	H	H	H	H	H
H	L	L	H	L	L	H	H	H	L	H	H	H	H
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H	L	L	H	L	H	H	H	H	H	L	H	H	H
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H	L	L	H	H	H	H	H	H	H	H	H	L	H



ETCH REV C OR LATER

REVISIONS		
CHK	CHANGE NO	REV

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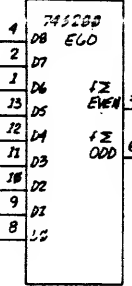
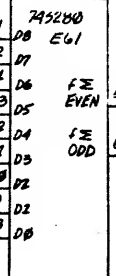
(SLOT 3)

TITLE	SIZE CODE	NUMBER	REV.
MASS BUS DATA PATHS (MDPD)	D CS	M8277-0-1	H
SCALE	SHEET 5 OF 20	DIST.	

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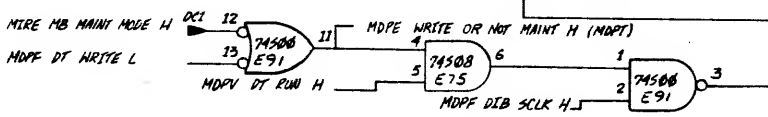
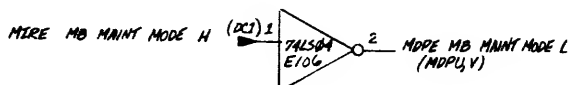
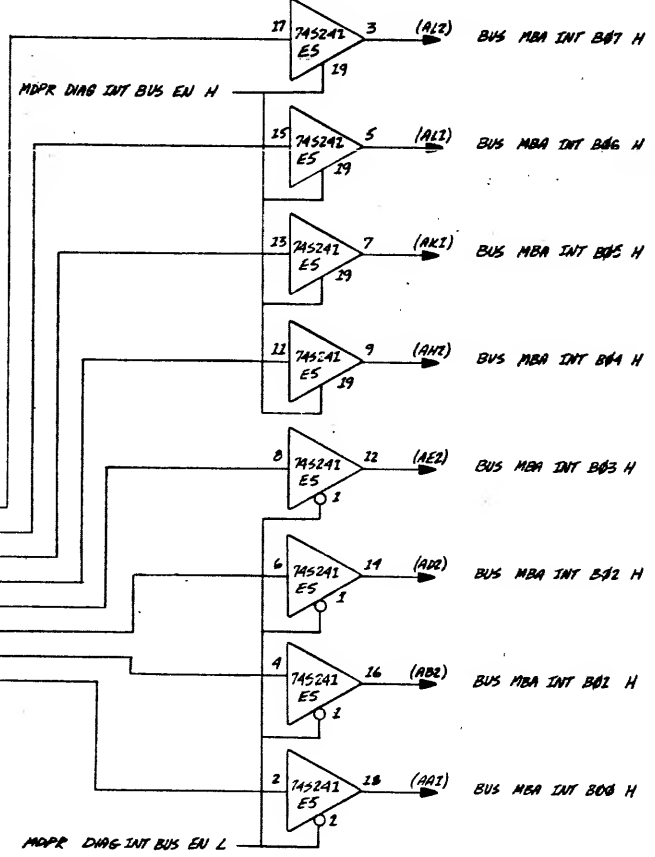
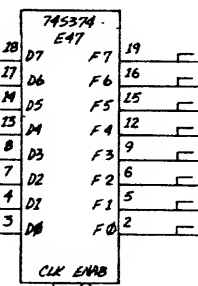
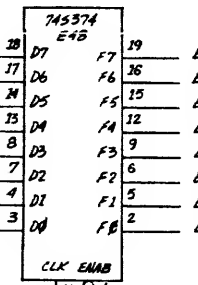
MDPV REC DATA PAR H  
MDPU REC MB DPD15 H  
MDPU REC MB DPD14 H  
MDPU REC MB DPD13 H  
MDPU REC MB DPD12 H  
MDPU REC MB DPD11 H  
MDPU REC MB DPD10 H  
MDPU REC MB DPD09 H  
MDPU REC MB DPD08 H

MDPV REC MB DPD07 H  
MDPV REC MB DPD06 H  
MDPV REC MB DPD05 H  
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MDPV REC MB DPD01 H  
MDPV REC MB DPD00 H



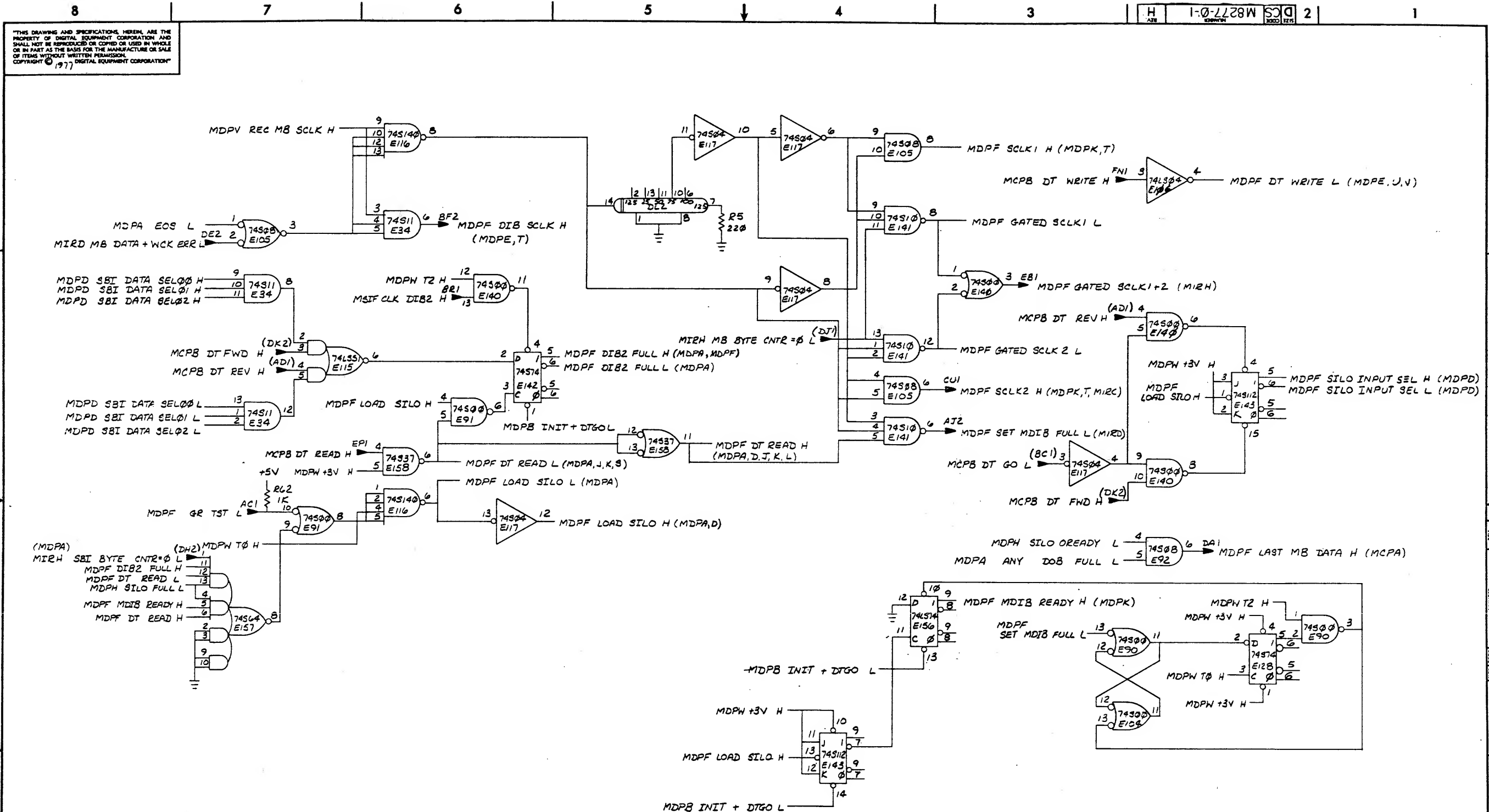
745280

# OF INPUTS HIGH	Σ EVEN	Σ ODD
0, 2, 4, 6, 8	H	L
1, 3, 5, 7, 9	L	H



REVISIONS		
CHK	CHANGE NO.	REV.

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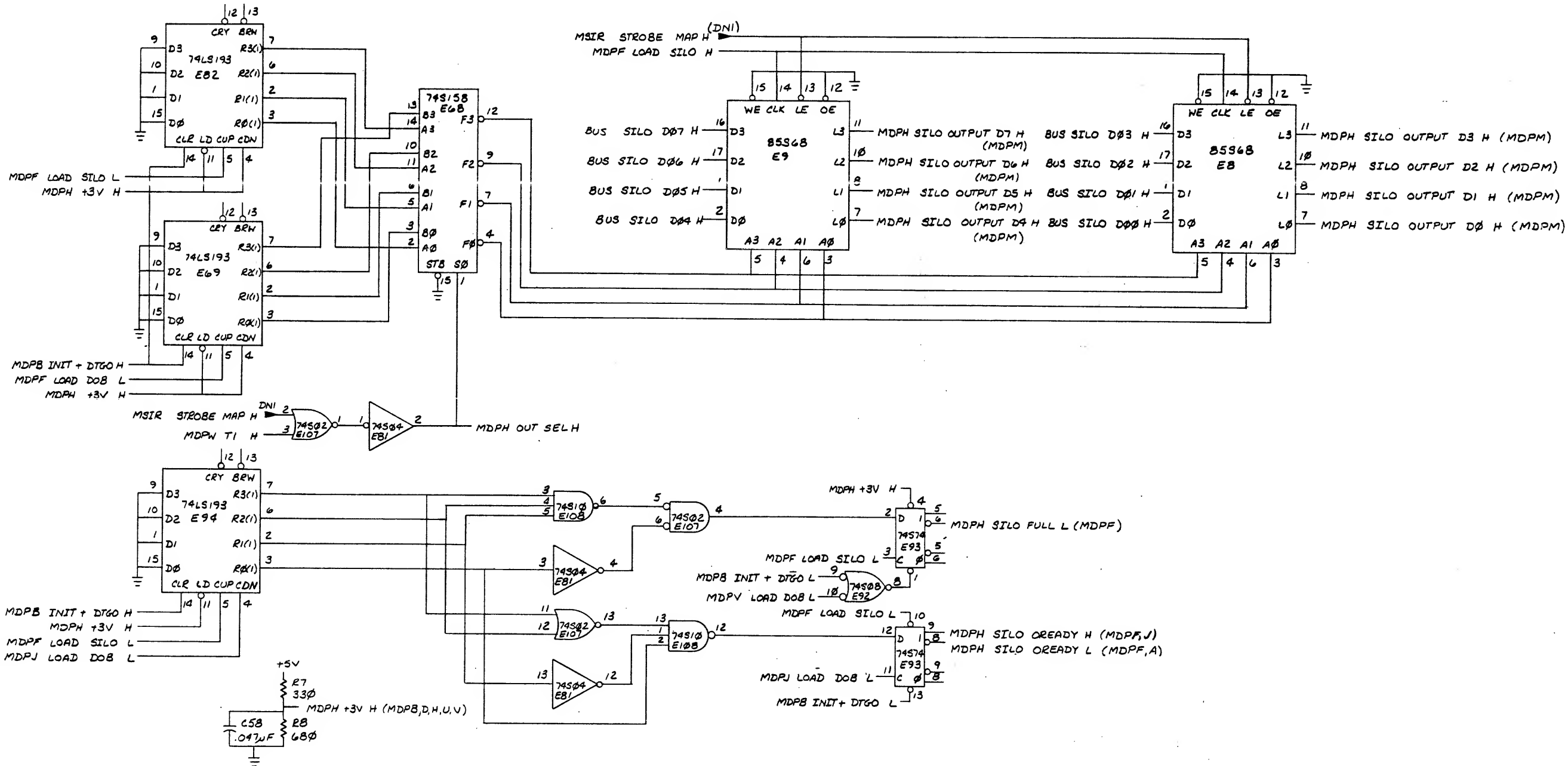
REVISIONS		
CHK	CHANGE NO.	REV.

(SILO INPUT CONTROL)		(SLOT 3)	
TITLE		NUMBER	
MASS BUS DATA PATHS (MDPF)		M8277-0-1	
SCALE		DIST.	
SHEET 7 OF 20		REV. H	

ETCH REV C OR LATER

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1-0-2228W DCS M8277-0-1



REVISIONS		
CHK	CHANGE NO.	REV.

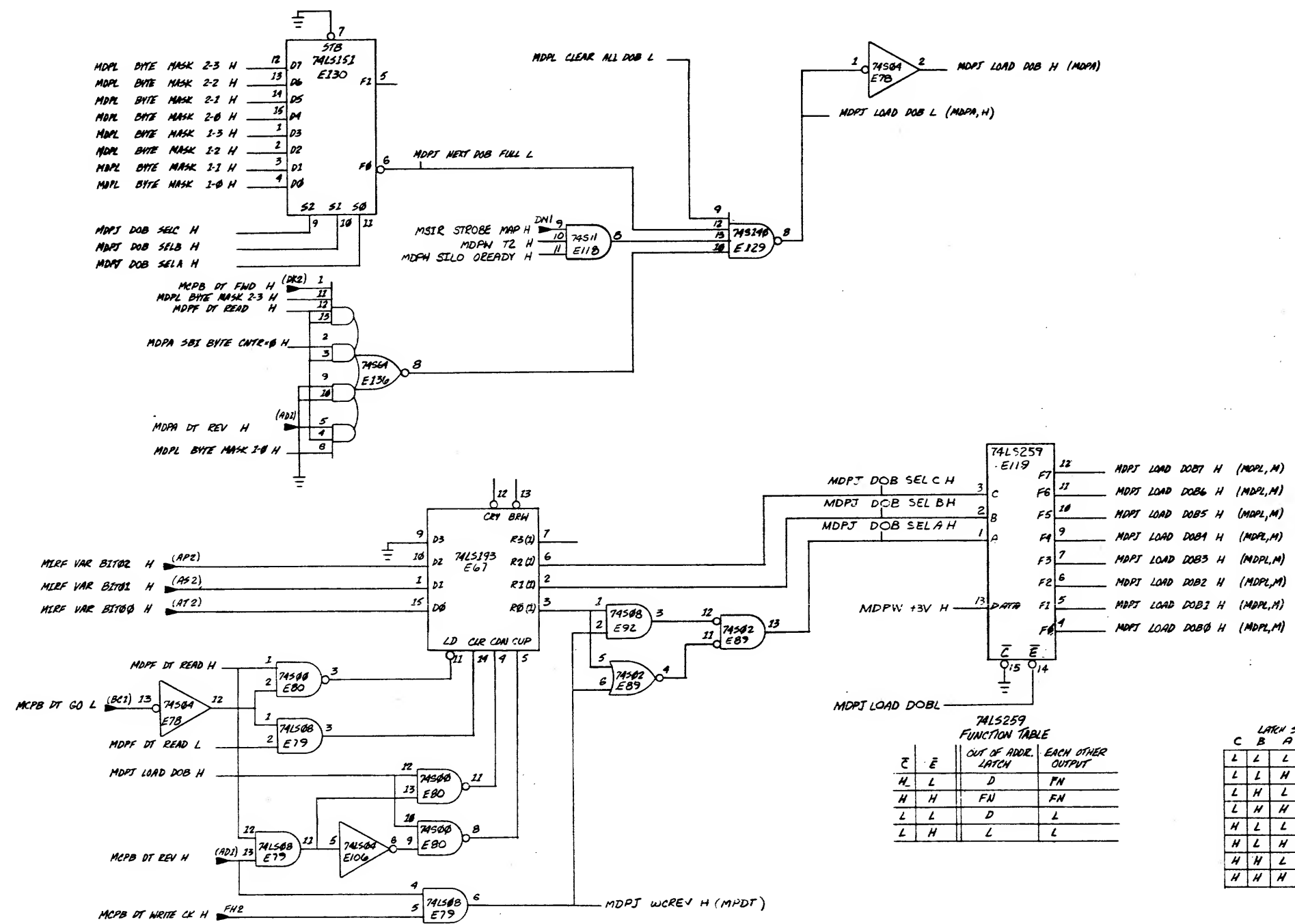
(SILO)		(SLOT 3)	
TITLE	MASS BUS DATA PATHS (MDPH)	SIZE CODE	D CS
NUMBER	M8277-0-1	REV.	H
SCALE	++	SHEET	8 OF 20
DIST.			

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1 2 3 4 5 6 7 8

74LS151  
SEL

STB	S2	S1	S0	F1	F0
H	X	X	X	L	H
L	L	L	L	D0	D0
L	L	L	H	D1	D1
L	L	H	L	D2	D2
L	L	H	H	D3	D3
L	H	L	L	D4	D4
L	H	L	H	D5	D5
L	H	H	L	D6	D6
L	H	H	H	D7	D7



74LS259  
FUNCTION TABLE

$\bar{C}$	$\bar{E}$	OUT OF ADDR. LATCH	EACH OTHER OUTPUT
H	L	D	FN
H	H	FN	FN
L	L	D	L
L	H	L	L

LATCH SELECTION TABLE

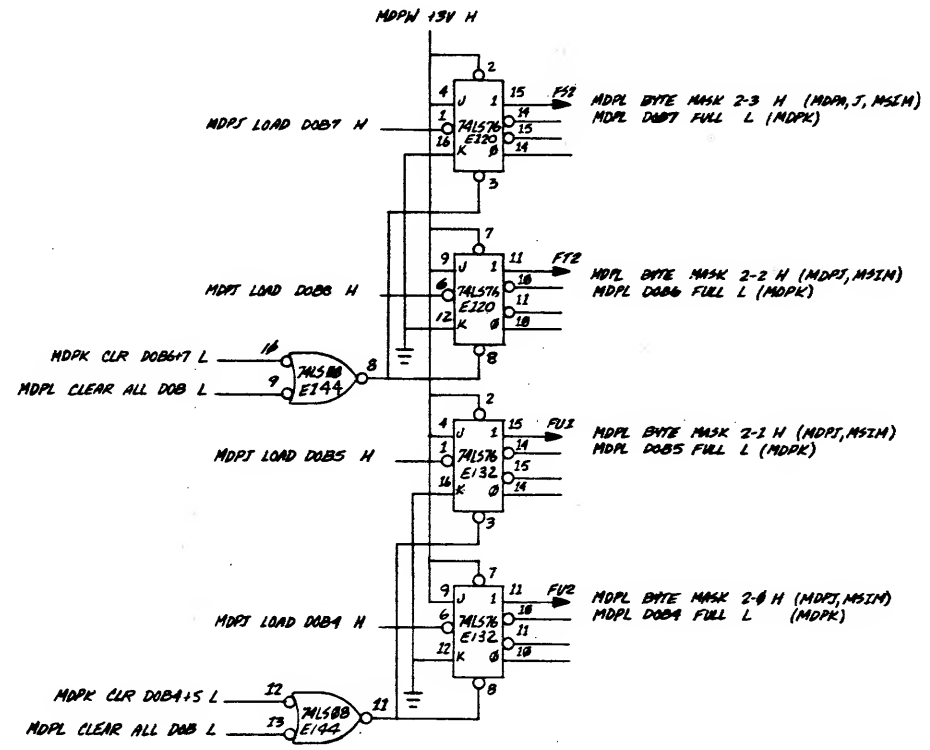
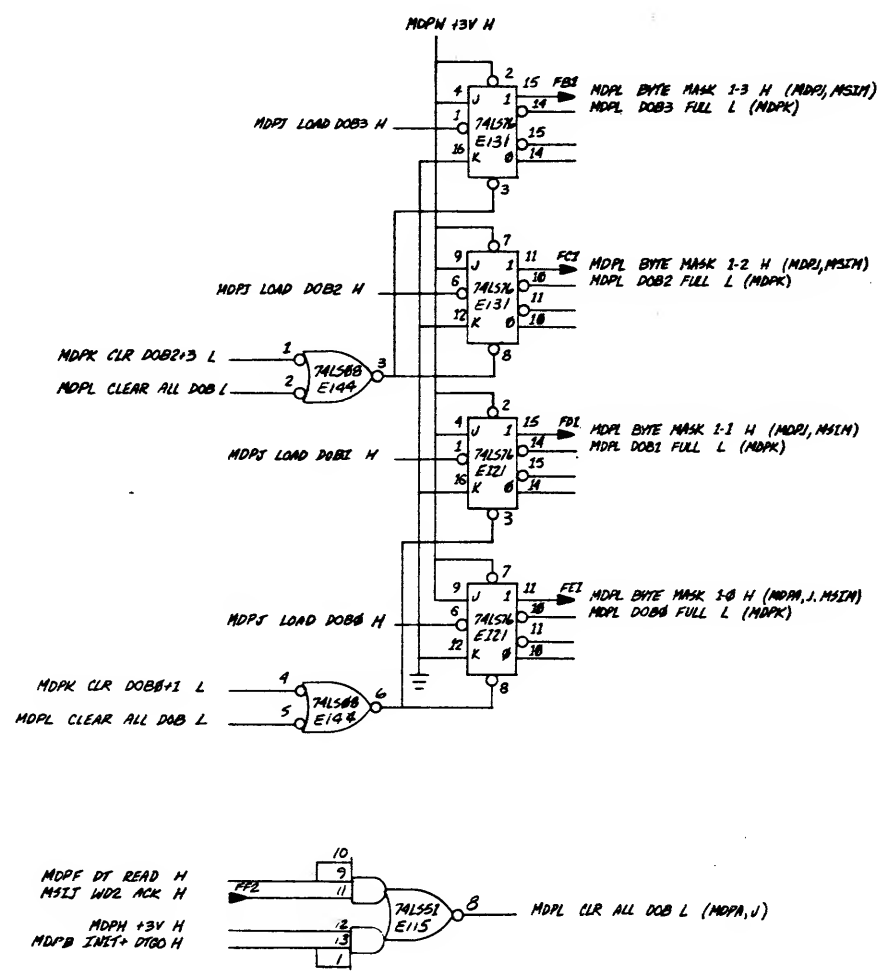
C	B	A	LATCH ADDRESSED
L	L	L	0
L	L	H	1
L	H	L	2
L	H	H	3
H	L	L	4
H	L	H	5
H	H	L	6
H	H	H	7

EACH REV C OR LATER



SCALE	SHEET 10 OF 20	DIST.
2	1 TW	

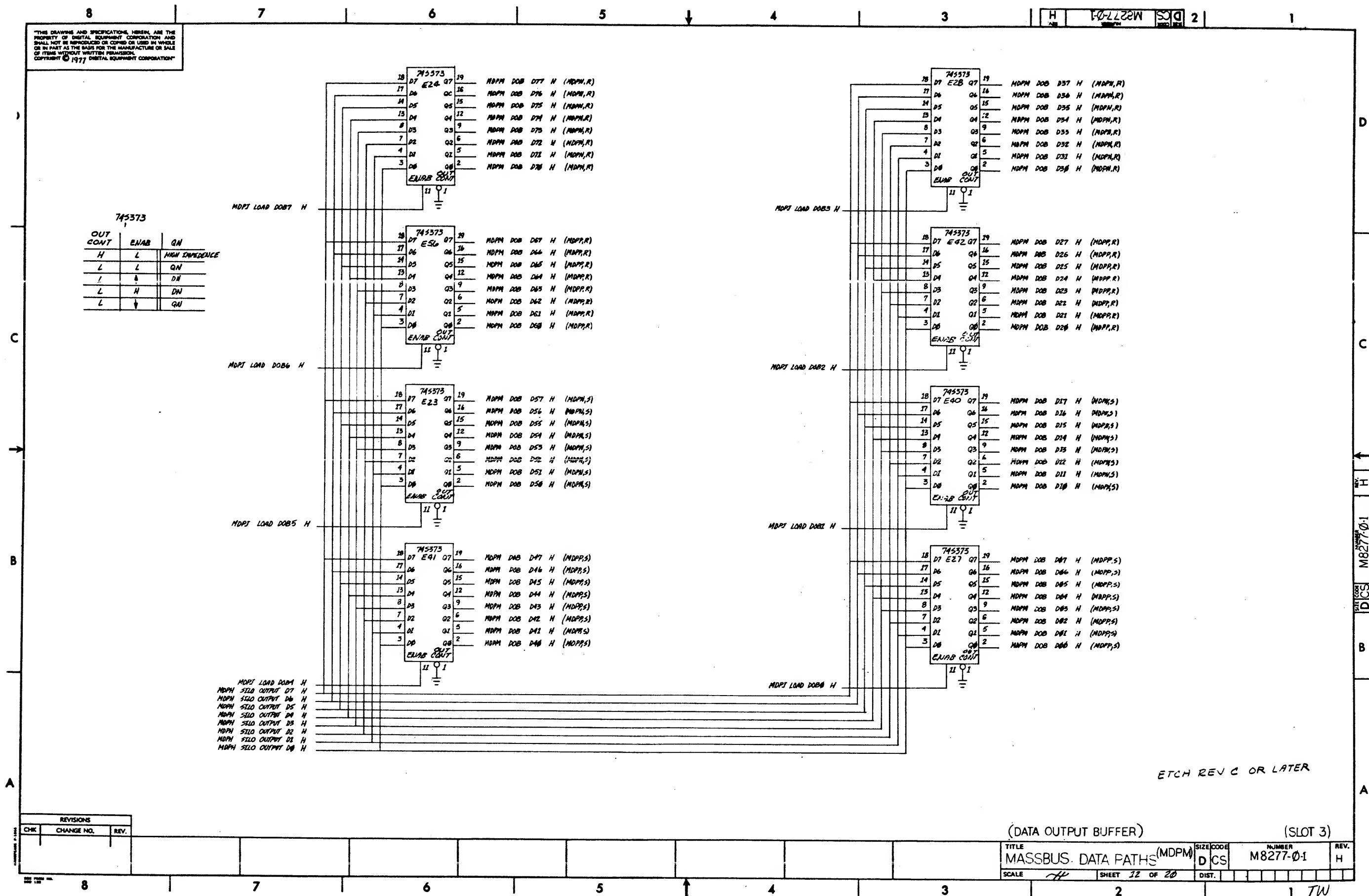
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ETCH REV C OR LATER

REVISIONS		
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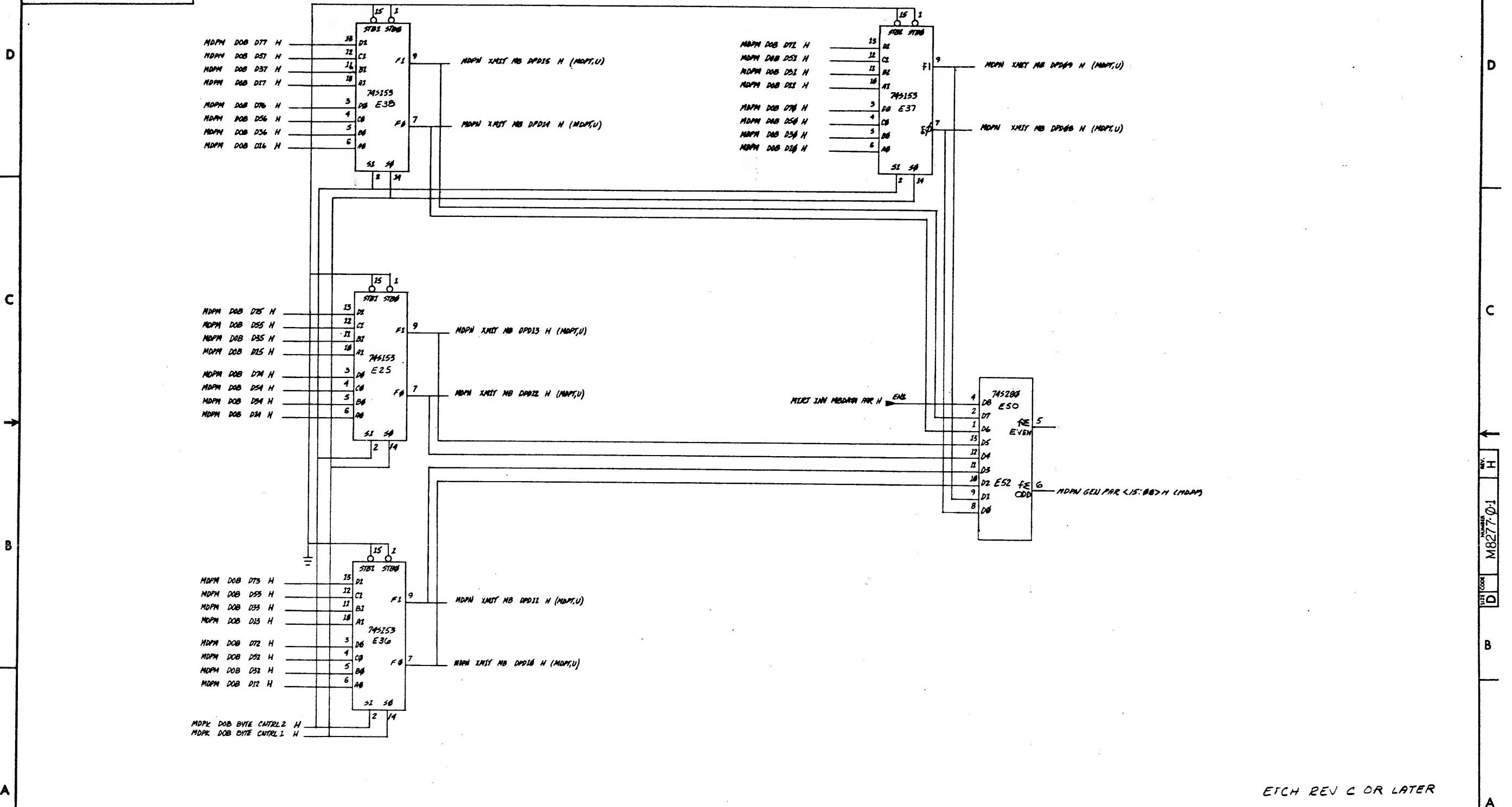
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TITLE	MASSBUS DATA PATHS (MDPL)	SIZE CODE	D CS
NUMBER	M8277-01	REV.	H
SCALE	1/1	SHEET	11 OF 20



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H 1-0-228N 2

1



(XMIT MB DATA <15:08> (PAR GEN))

SLOT 3

TITLE MASSBUS DATA PATHS (MDPN) SIZE CODE D CS NUMBER M8277-01 REV. H

SCALE 1/1 SHEET 13 OF 20 DIST.

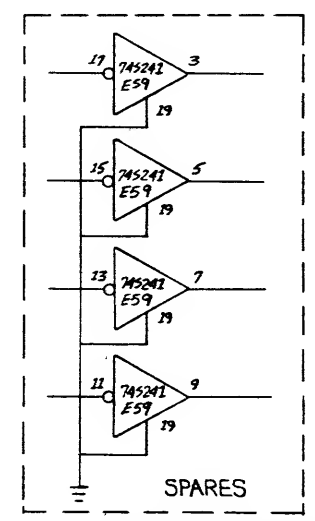
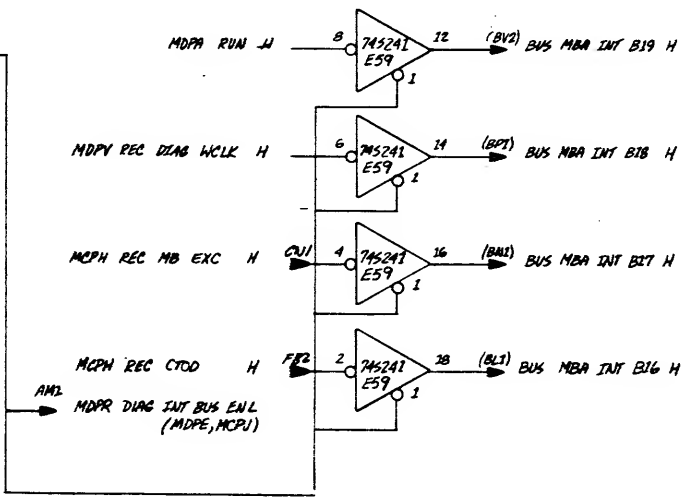
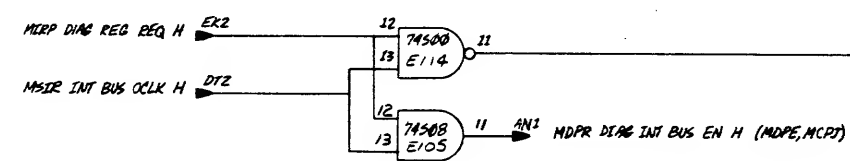
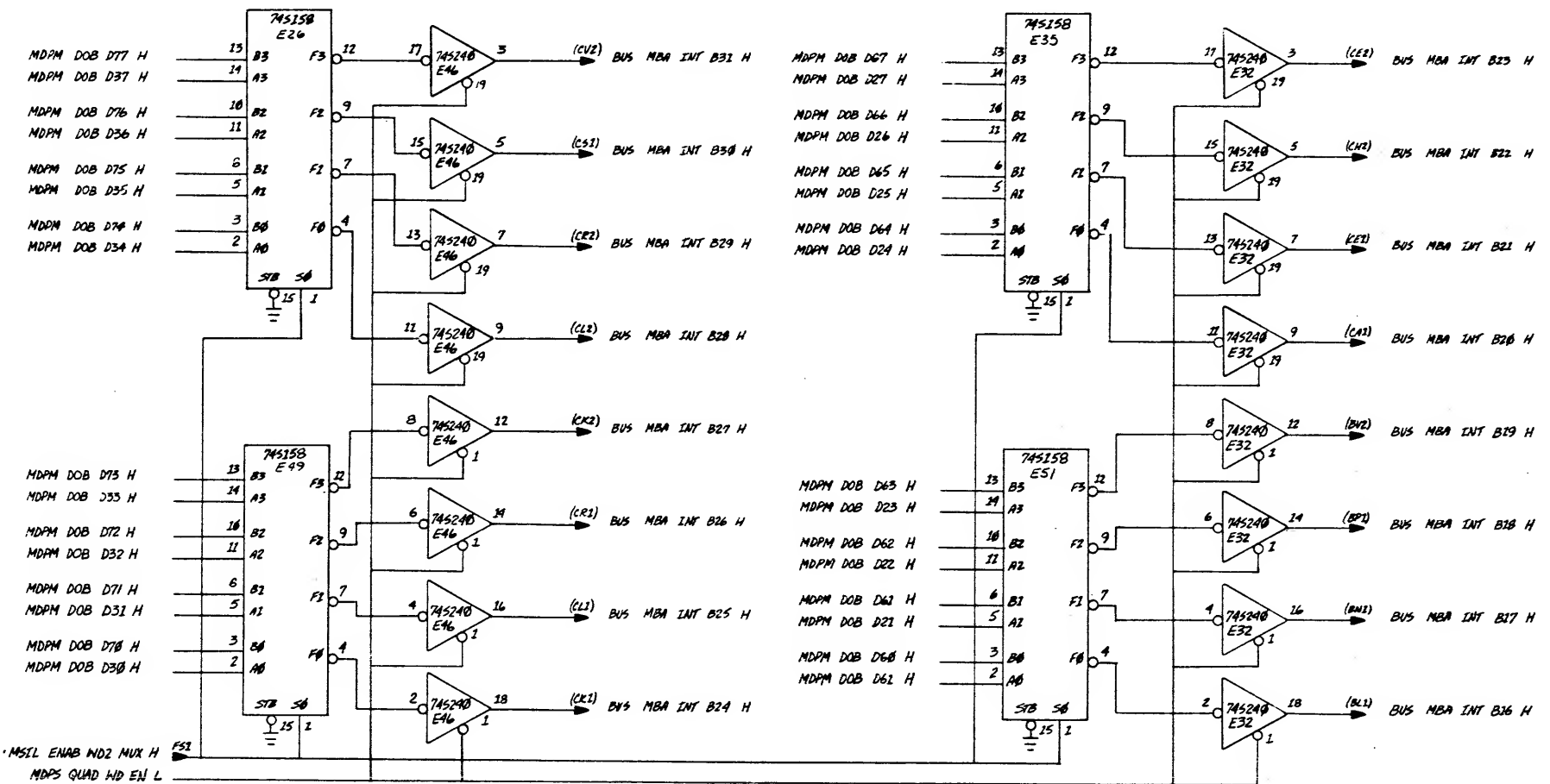
1 TW

ETCH REV C OR LATER



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STB	S0	FN
H	X	H
L	L	AN
L	H	BN



ETCH REV C OR LATER

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		MASSBUS DATA PATHS (MDPP)	SIZE CODE	D CS	NUMBER	M8277-0-1	REV.	H
SCALE			SHEET	15	OF	20	DIST.	

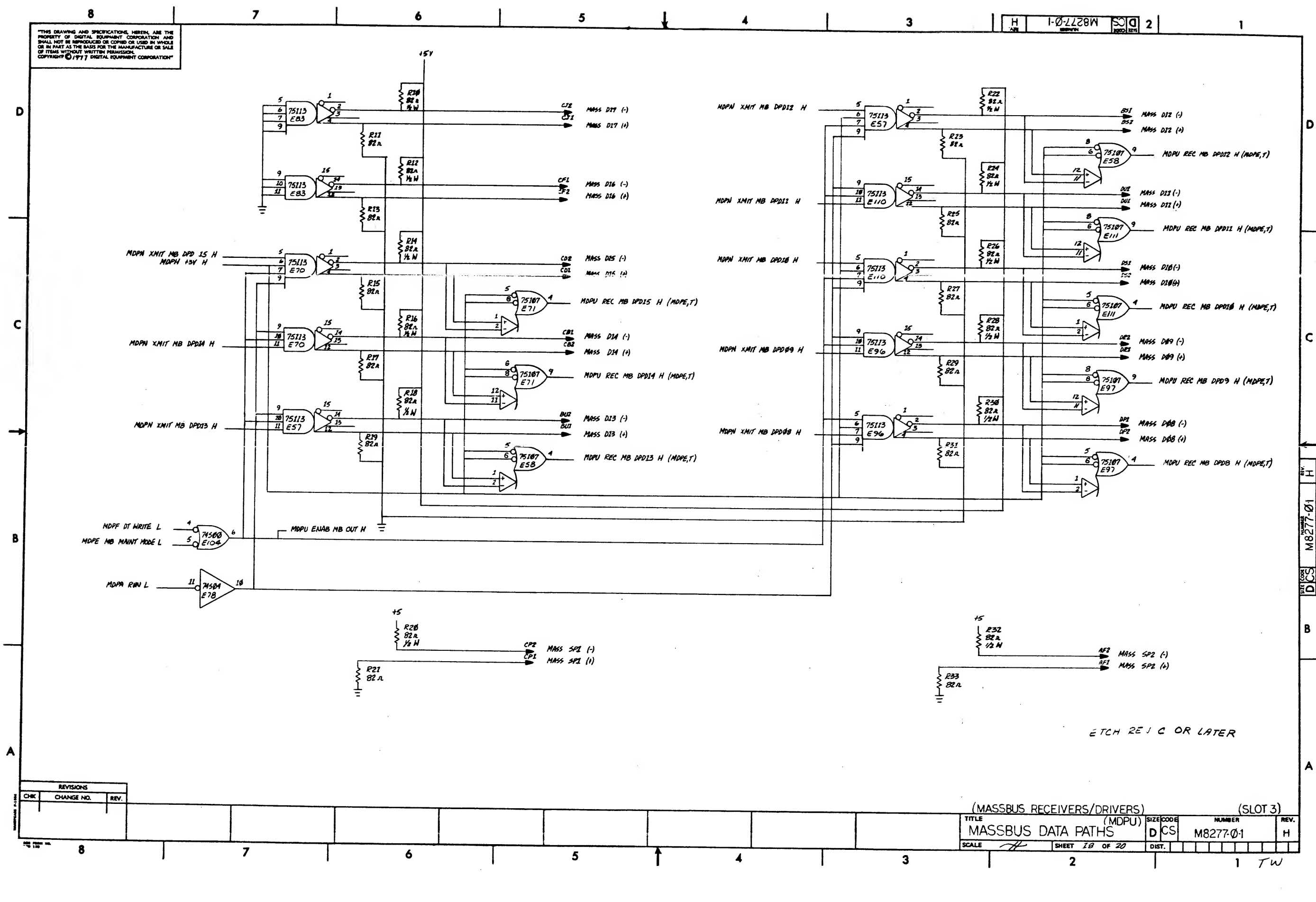
(INT BUS DRIVERS < 15:00 >)				(SLOT 3)			
TITLE		(MDPS)		SIZE	CODE	NUMBER	REV.
MASSBUS DATA PATHS				D	CS	M8277-0-1	H
SCALE	<i>7/8</i>	SHEET	16	OF	20	DIST.	
			2				1 <i>TW</i>





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H 1-0-LL28W 2



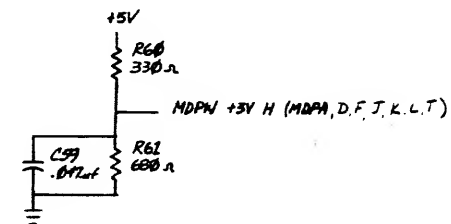
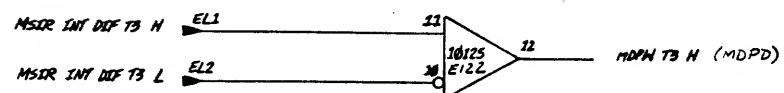
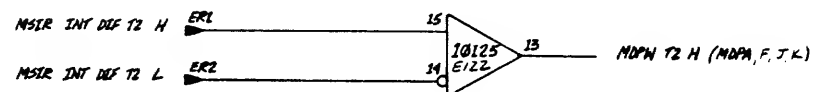
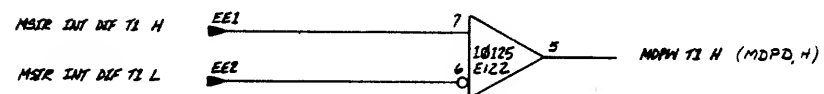
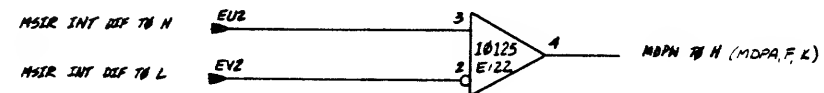
ETCH RE J C OR LATER

REV.	CHANGE NO.	CHK

(MASSBUS RECEIVERS/DRIVERS)		(SLOT 3)	
TITLE	MASSBUS DATA PATHS	SIZE CODE	D CS
SCALE	1/8	SHEET	18 OF 20
NUMBER	M8277-01	REV.	H



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ETCH REV C OR LATER

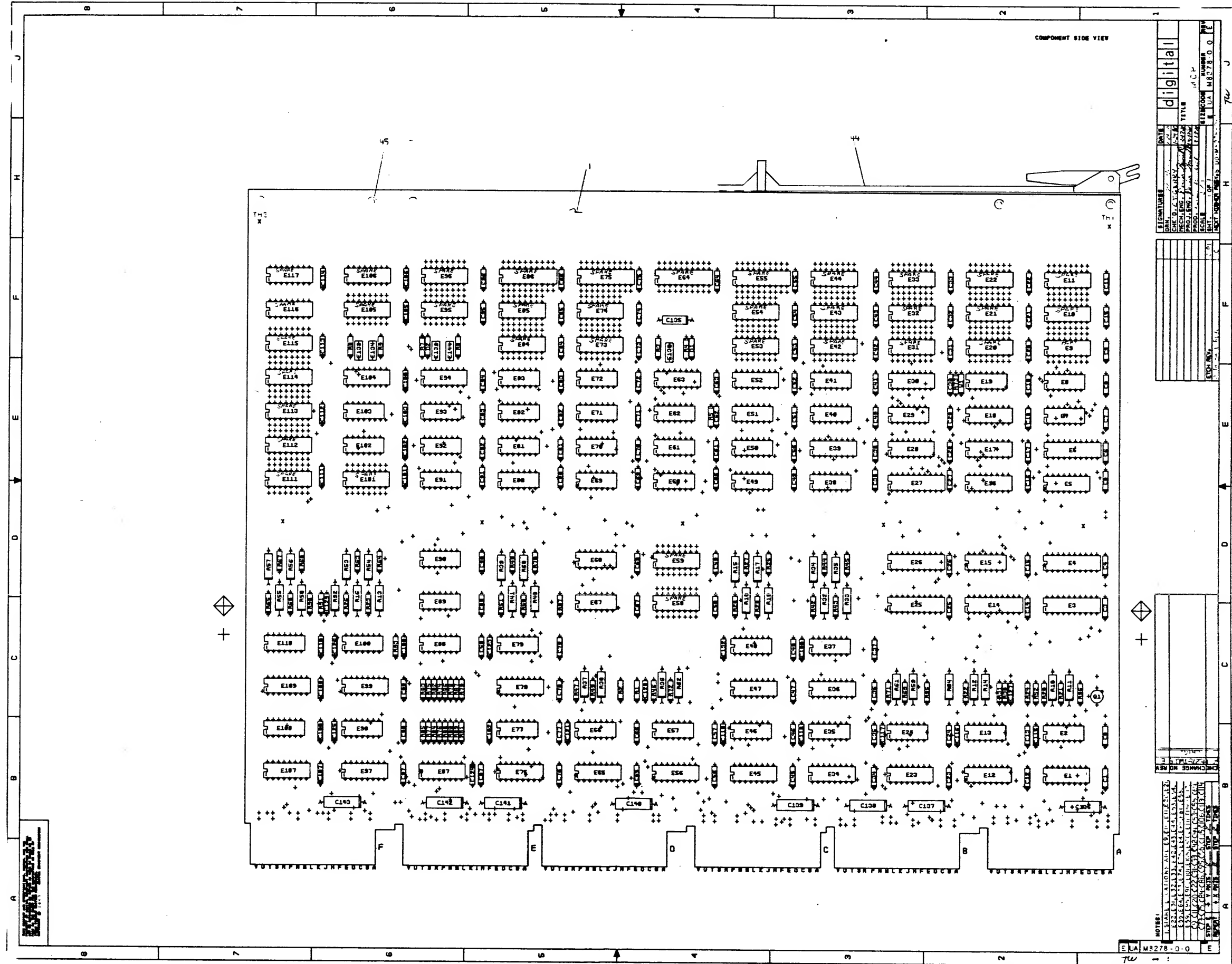
REVISIONS		
CHK	CHANGE NO.	REV.

(MDP CLOCKS)

(SLOT 3)

TITLE		SIZE/CODE	NUMBER	REV.
MASSBUS DATA PATH (MDPW)		D CS	M8277-01	H
SCALE	SHEET 20 OF 20	DIST.		

1 TW



LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	E-MD-5012649-0-0	5012649-00 M8278	1	
2	2		1000019-00 150.0 MMF 100V 5%200PPM MICA	2	C144,C133
3	3		1005820-00 22.0 MMF 100V 5%200PPM MICA	1	C134
4	4		1011895-00 .15 MFD 35V 10% S.TANT	1	C135
5	5		1012121-00 220.0 MMF 100V 1%200PPM MICA	2	C130,C131
6	6		1012084-01 8 MFD 25V +75-10% AL EL	8	C136-C143
7	7	BLANK		0	
8	8		1100114-00 D 664 OS\75PCB PIV= 25V SP	2	D1,D2
9	9		1300220-00 100.0 .25 W 5.0 % CC	1	R97
10	10		1300488-00 12.0 K .25 W 5.0 % CC	1	R4
11	11		1300365-00 1.0 K .25 W 5.0 % CC	2	R5,R73
12	12		1301424-00 680.0 .25 W 5.0 % CC	3	R2,R31,R91
13	13		1301423-00 6.80 K .25 W 5.0 % CC	1	R3
14	14		1300295-00 330.0 .25 W 5.0 % CC	3	R1,R30,R90
15	15		1301477-00 82.0 .25 W 5.0 % CC	32	R20-R29,R42-R51,R63-R72,R93,R95
16	16		1305346-00 27.0 K .25 W 5.0 % CC	1	R7
17	17		1301781-00 82.0 .50 W 5.0 % CC	32	R10-R19,R32-R41,R53-R62,R92,R94
18	18		1301874-00 5.60 K .25 W 5.0 % CC	3	R6,R8,R9
19	19		1302957-00 121.0 .25 W 1.0 % RN55D-F10	8	R82-R89
20	20		1311422-00 178.0 .25 W 1.0 % RN55D-F10	8	R74-R81
21	21		1300439-00 3.30 K .25 W 5.0 % CC	1	R52
22	22		1312930-00 5.10 K .25 W 5.0 % CC	1	R96
23	23		1503014-00 DEC 3646 NPN 200MW SI 15 5 30	1	Q1
24	24		1910532-00 74S00 NAND GATE-QUAD 2IN	5	E71,E51,E102,E67,E68
25	25		1910534-00 74S04 INVERTER GATE-HEX 1I	3	E80,E41,E91
26	26		1912389-00 74S08 AND GATE-QUAD 2IN,PO	5	E81,E61,E49,E93,E98
27	27		1910536-00 74S10 NAND GATE-TRIPLE 3IN	2	E69,E40
28	28		1910537-00 74S11 AND GATE-TRIPLE 3IN	1	E50
29	29		1910539-00 74S20 NAND GATE-DUAL 4INPU	2	E70,E19
30	30		1910542-00 74S64 A-0-I GATE 4-2-3-2	1	E83

REVISION HISTORY		BASIC PART NO: M8278		DRN: K.FRIEDGEN		DATE: 11-SEP-79		D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D: F.GAROFALO		DATE: 11-SEP-79		TITLE PARTS LIST	
---	INITIAL	D	SECTION VARIATION INDEX	DES.ENG: K.OKIN		DATE: 11-SEP-79		MCP	
RC	TW005	E	(A) 00	RESP.ENG.: K.OKIN		DATE: 11-SEP-79		DOCUMENT NUMBER	
			(B)	MFG.ENG.: M.TERELLA		DATE: 11-SEP-79		SIZE CODE NUMBER REV	
			(C)	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME: EDIT #	
			(D)	E-UA-M8278-0-0				Z0650E,PLS 4	
			(E)						
			(F)						
			(G)						
			(H)						
			(I)						
			(J)						
			(K)						
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			(M)						
			(N)						

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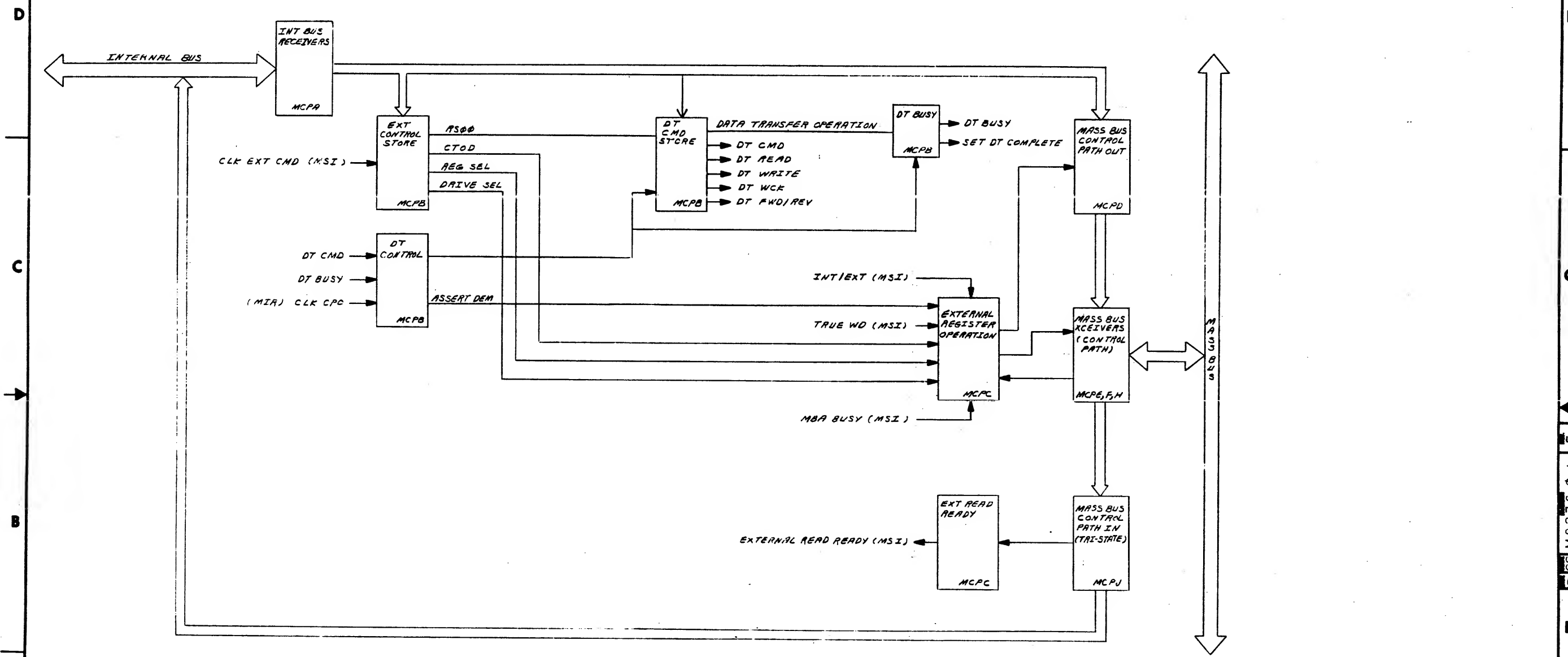
tw

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
31	31		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	6	E72,E60,E62,E82,E92,E103
32	32		1905585-00	7476 FF-JK DUAL,MASTER SL	1	E52
33	33		1910436-00	DEC 74123 ONE SHOT-DUAL,RETRIG	3	E63,E94,E104
34	34		1911675-00	74S138 DECODER/DEMUX 3-8 LIN	1	E30
35	35		1910546-00	74S140 NAND GATE-DUAL 4INPU	2	E89,E38
36	36		1912697-00	LS174 FF-D HEX W/CLEAR	4	E17,E28,E16,E5
37	37		1910957-00	74S175 FF-D QUAD COMMON CLO	2	E18,E39
38	38		1913493-00	74S241 OCTAL BUFFER,TRI-STA	3	E26,E27,E4
39	39		1911573-00	74S280 PARITY GEN/CHKR,9BIT	4	E15,E7,E29,E8
40	40		1913671-00	74S374 FF-D OCTAL TRISTATE	4	E25,E3,E14,E6
41	41		1910268-00	DEC 75107B RECEIVER,LINE,DUAL,	16	E2,E48,E98,E46,E13,E35,E37,E57, CONT E66,E79,E77,E100,E108,E110,E24, CONT E88
42	42		1911341-00	75113 DRIVER,LINE,DUAL,MA	15	E1,E47,E97,E45,E12,E34,E36,E56, CONT E65,E78,E76,E99,E107,E109,E23 CONT E87
43	43		1911415-00	10125 ECL TO TTL TRNSLTR	1	
44	44		1216988-02	HANDLE,MODULE,HEX TWO EJECTORS	1	
45	45		9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
46	46		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	1	W1
47	47		1012784-00	.047 MFD 50V +80-20% CER	102	C1-C8,C12-C19,C23-C30,C34-C41, CONT C45-C52,C56-C63,C65-C72,C76-C83, CONT C87-C94,C97-C104,C107-C112, CONT C115-C129,C132

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							MCP		K	PL	M8278-0-DBP	E

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(BLOCK DIAGRAM)

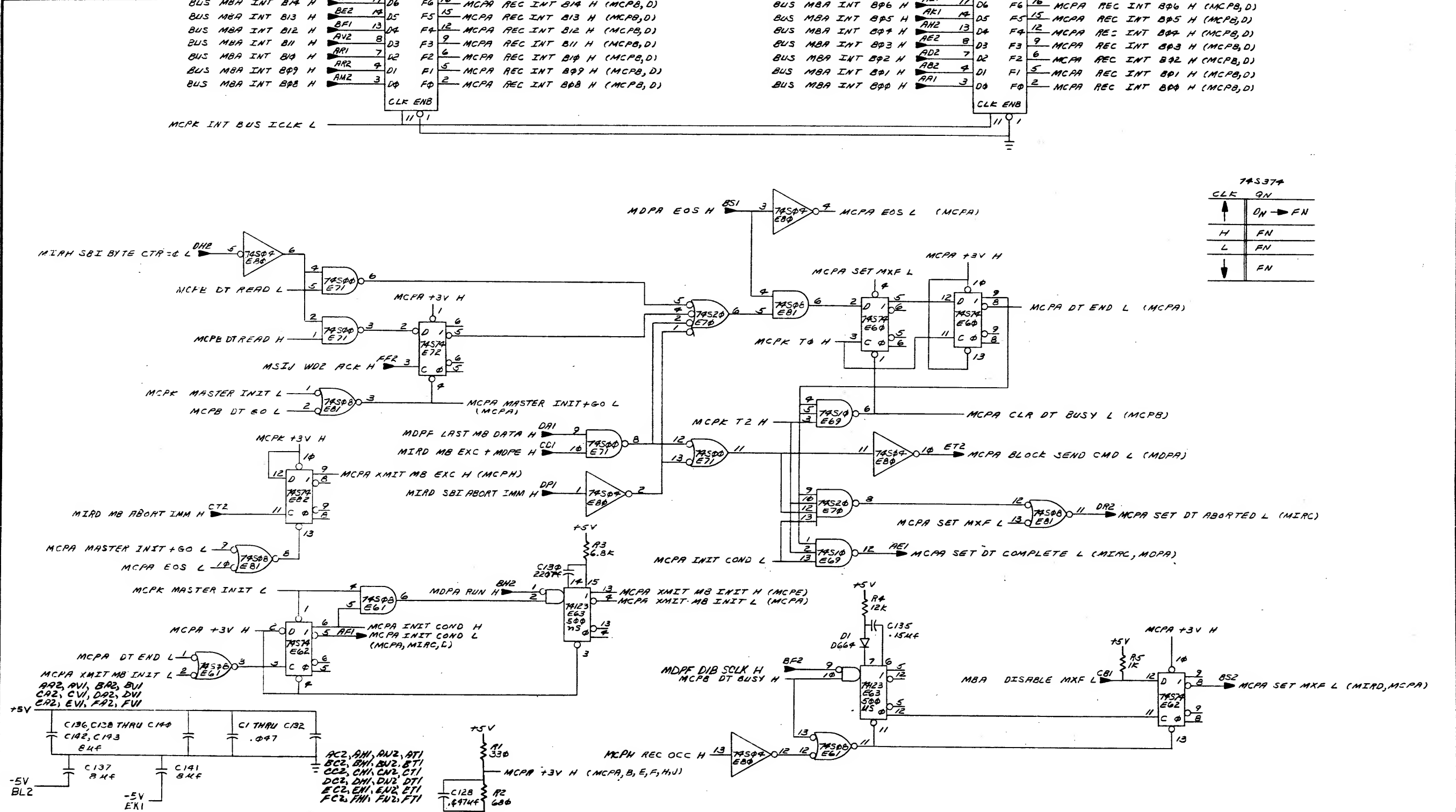
(SLOT 4)

DRN. <i>Eng. Approval</i>	3-31-77	FIRST USED ON	<i>310000</i>
CHK'D <i>Eng. Review</i>	5-4-77		
ENG. <i>En. R.</i>	5-12-77	TITLE	
PROJ. ENG. <i>G. R.</i>	5-12-77	MASSBUS CONTROL	
PROD. <i>Eng. R.</i>	6-11-77	PATH (MCP)	
NEXT HIGHER ASSY.			
SCALE	+	SIZE CODE	D CS
SHEET	1 OF 10	NUMBER	M8278-0-1
		REV.	F

1 TW

CHK	CHANGE NO.	REV.
1	M8278-0001	B
2	M8278-0002	C
3	M8278-0003	D
4	M8278-0004	E
5	M8278-0005	F
6	M8278-0006	G
7	M8278-0007	H
8	M8278-0008	I
9	M8278-0009	J
10	M8278-0010	K
11	M8278-0011	L
12	M8278-0012	M
13	M8278-0013	N
14	M8278-0014	O
15	M8278-0015	P
16	M8278-0016	Q
17	M8278-0017	R
18	M8278-0018	S
19	M8278-0019	T
20	M8278-0020	U
21	M8278-0021	V
22	M8278-0022	W
23	M8278-0023	X
24	M8278-0024	Y
25	M8278-0025	Z

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MSIO WRITE FCN H

MCPA REC INT B07 H

MCPA REC INT B06 H

MCPA REC INT B05 H

MCPA REC INT B02 H

MCPA REC INT B04 H

MCPA REC INT B03 H

MCPA REC INT B01 H

MCPA REC INT B00 H

MSTE CLK EXT CMD H

MCPK MASTER INIT L

74LS174  
E17

74LS175  
E18

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FUNCTION	B05	B04	B03
READ	1	1	1
WRITE	1	1	0
WRITE CHECK	1	0	1

DIRECTION	B02	B01
REV	1	1
FWD	x	0
FWD	0	x

IF EXT REG SEL = A0  
(CS0 V CS1 V CS2 V CS3 V CS4 = 0)  
AND GO BIT SET  
(B00 = 1)

(MCPK) MIRE PGM INIT L (B01)  
(MCPK) MIRE PGM INIT L (B02)

(SLOT 4)  
(RS/DS ADDRESS LATCH, DEM ASSERTION CONTROL, "GO BIT"  
AND TRANSFER TYPE DECODE, DATA TRANSFER BUSY FLOP)

TITLE MASSBUS CONTROL  
PATH (MCPB)  
SCALE + SHEET 3 OF 10  
D CS M8278-0-1  
REV. F

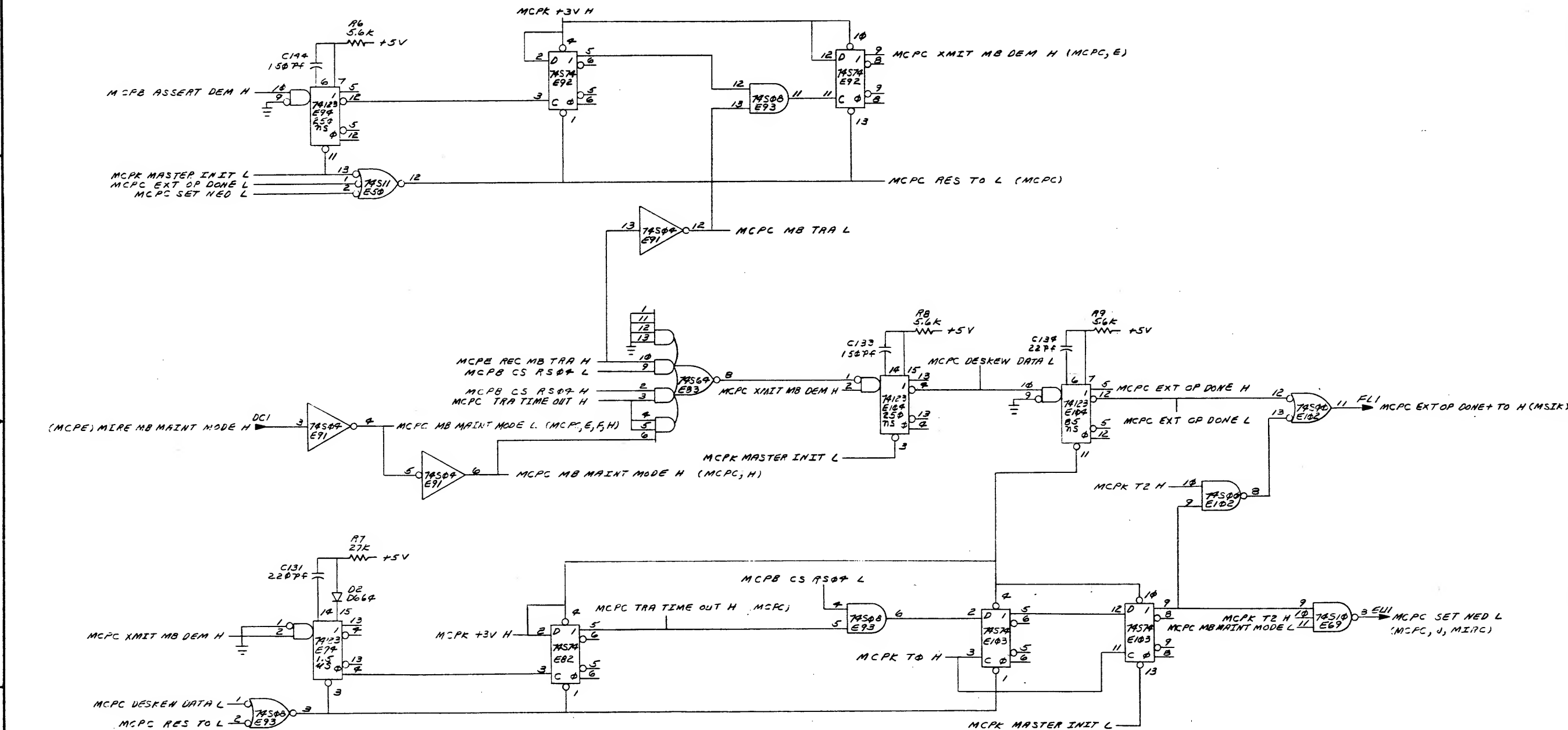
CLK	OUTPUT
↑	DN → RN (1), DN → RN (0)
H	RN
L	RN
↓	RN

D CS M8278-0-1

B

A

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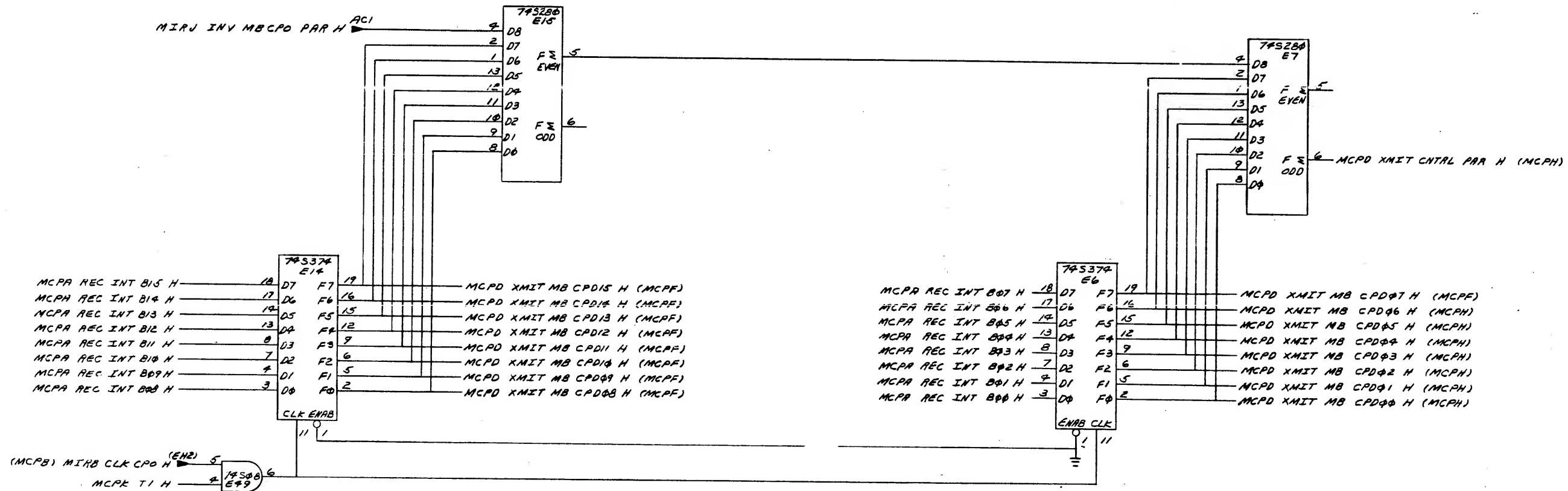


REVISIONS		
CHK	CHANGE NO.	REV.

(SLOT 4)  
(DEM DESKEW ONE SHOT, TR A DESKEW ONE SHOT,  
EXT OP DONE TIMEOUT ONE SHOT, SET NED)

TITLE	MASSBUS CONTROL (MCPC)	SIZE CODE	D CS	NUMBER	M8278-0-1	REV.	F
SCALE	+	SHEET	4 OF 10	DIST.			

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74S280

# INPUTS HIGH	Σ E	Σ O
0, 2, 4, 6, 8	H	L
1, 3, 5, 7, 9	L	H

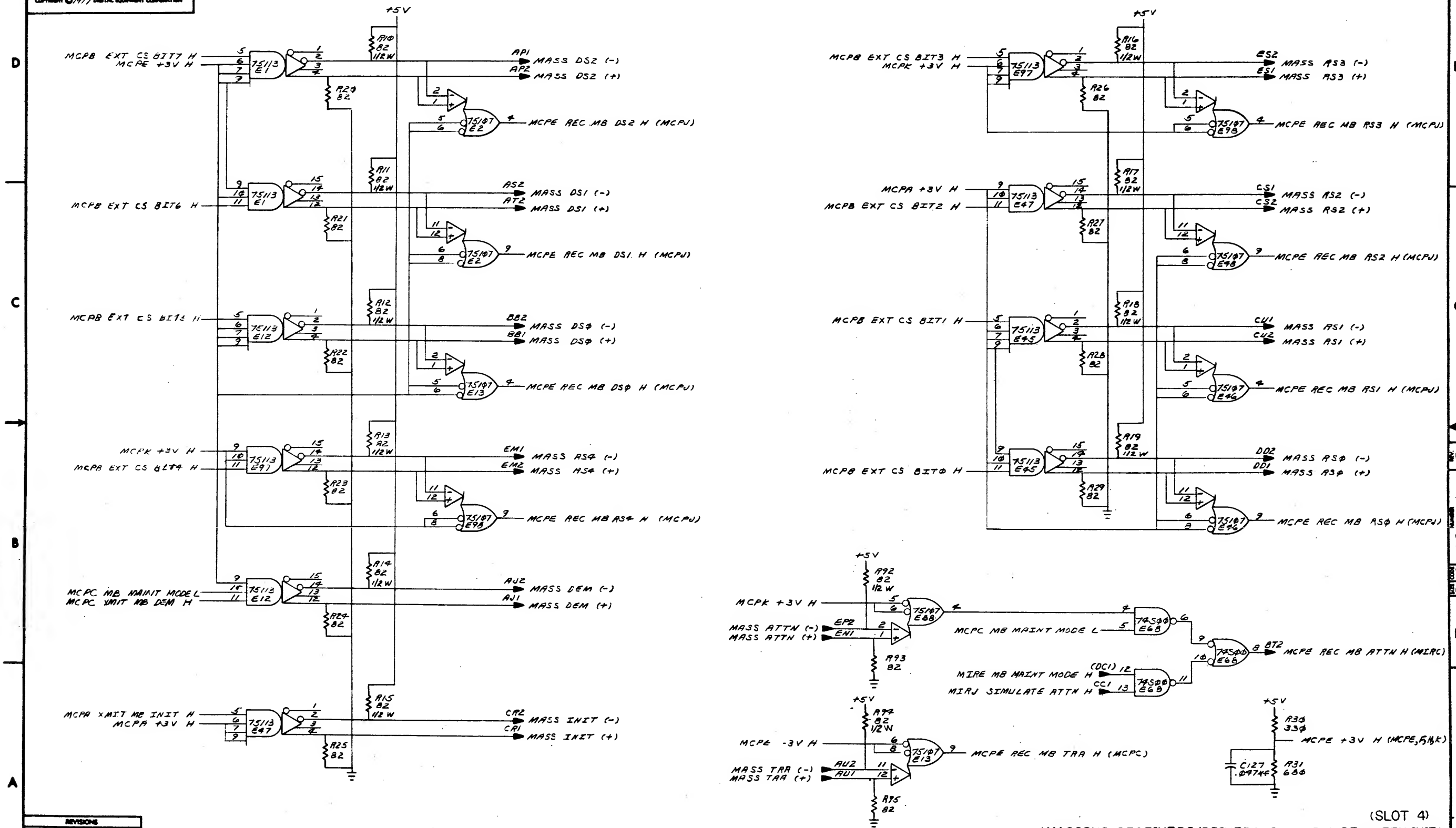
REVISIONS		
CHK	CHANGE NO.	REV.

(MASSBUS CONTROL PATH OUT DATA/PARITY) (SLOT 4)

TITLE		SIZE/COOE	NUMBER	REV.
MASSBUS CONTROL PATH (MCPD)		DCS	M8278-0-1	F
SCALE	SHEET	5 OF 10	DIST.	

1 TW

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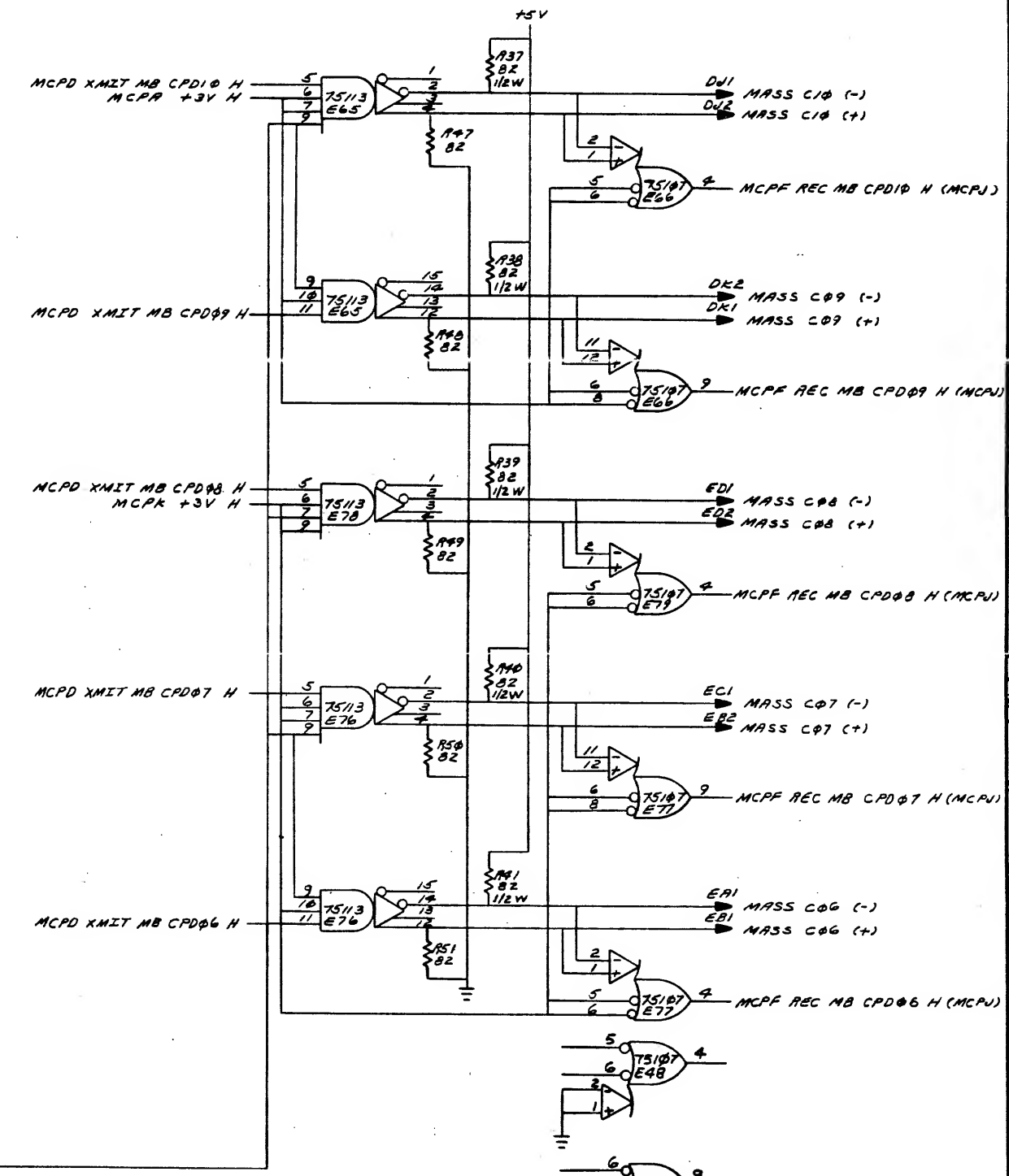
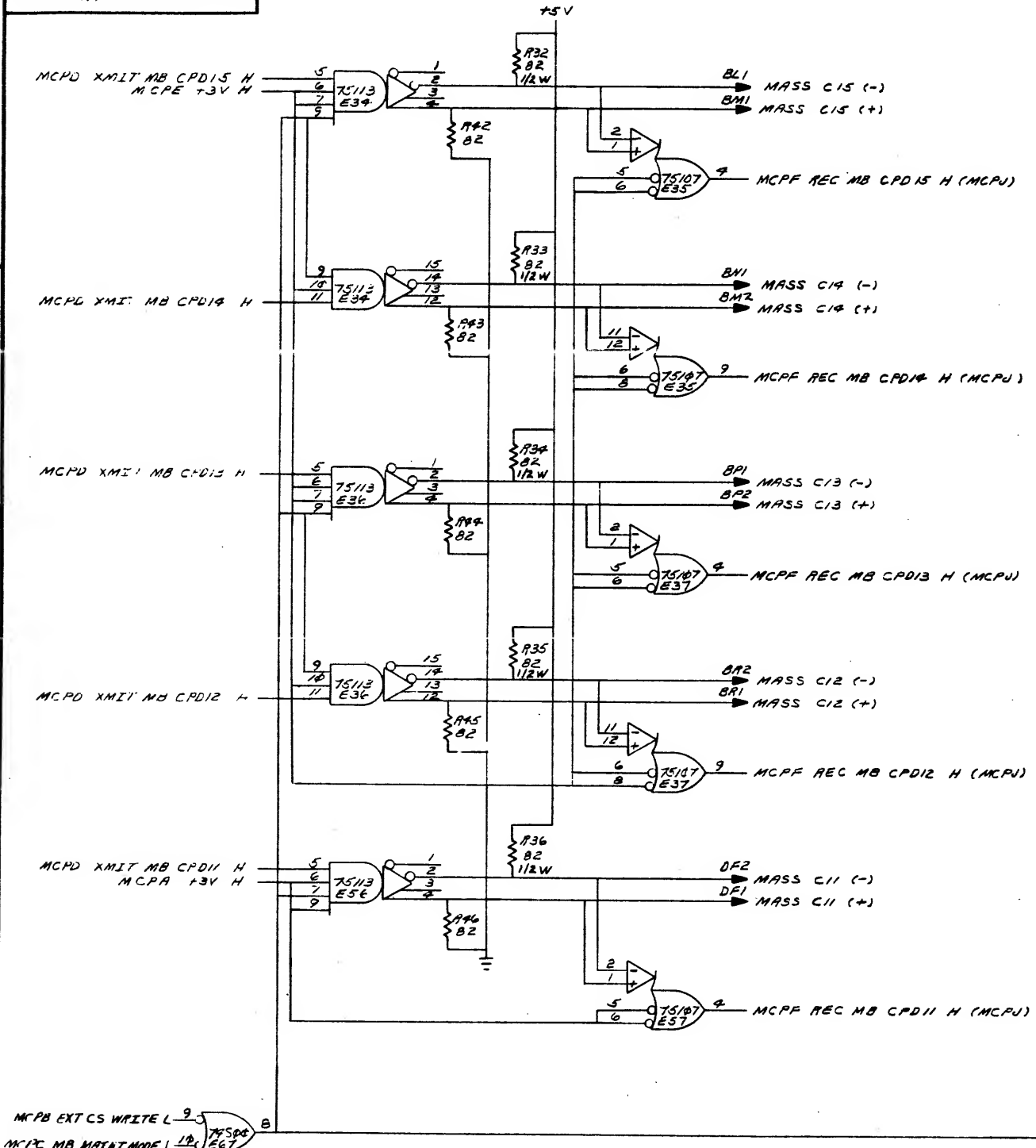
REVISIONS		
CHK	CHANGE NO.	REV.

(SLOT 4)  
(MASSBUS RECEIVERS/DRIVERS DS,RS,TRN,DEM,ATTN,INIT)

TITLE	MASSBUS CONTROL PATH (MCPE)	SIZE/COO	NUMBER	REV.
SCALE	1/2"	SHEET	6 OF 10	ONT.

DCS M8278-0-1

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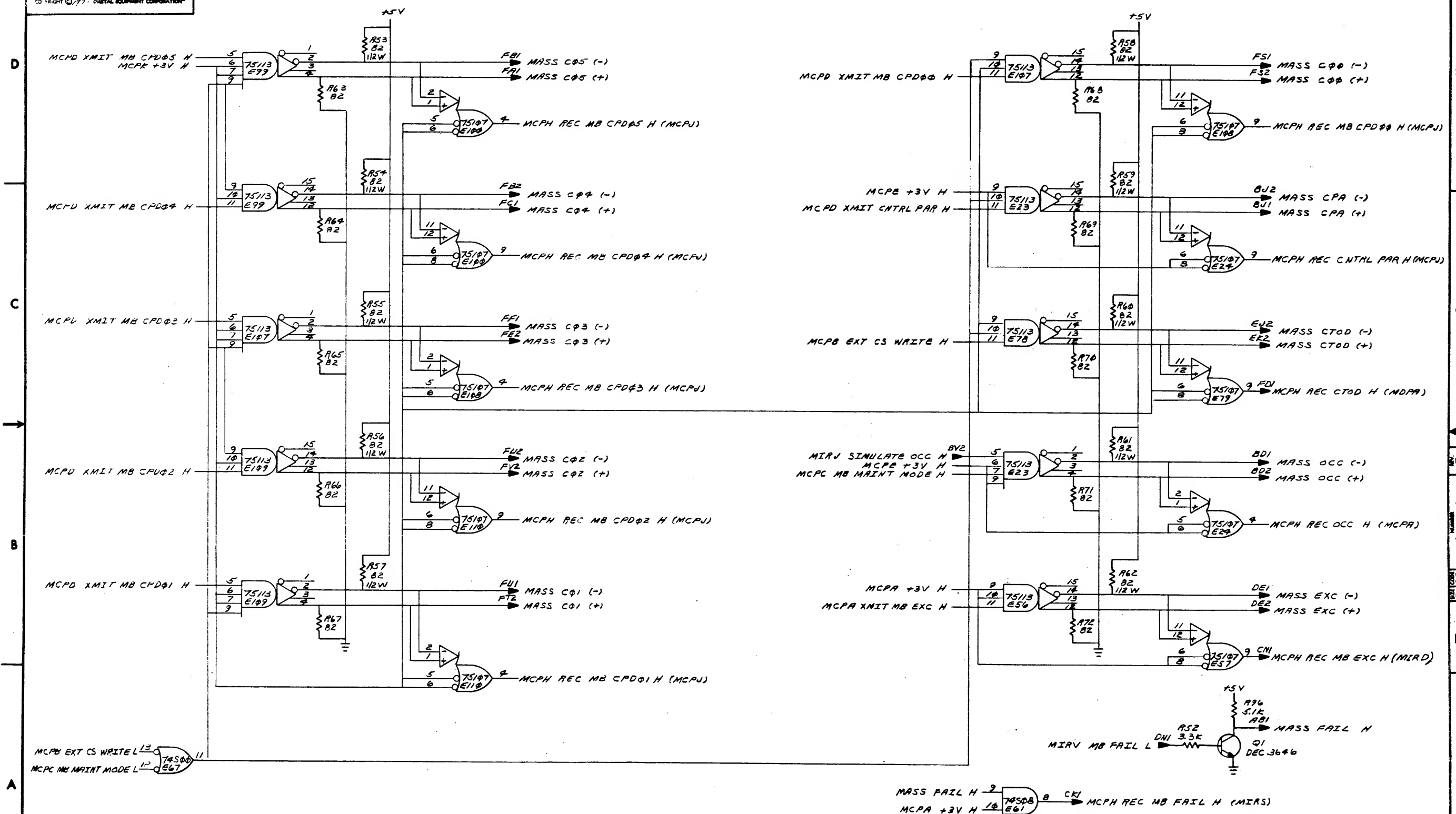
REVISIONS		
CHK	CHANGE NO.	REV.

(MASSBUS RECEIVERS/DRIVERS DATA 06:15) (SLOT 4)

TITLE MASSBUS CONTROL PATH (MCPF)		SIZE CODE	NUMBER	REV.
DCS M8278-0-1		DCS	M8278-0-1	F
SCALE	SHEET 7 OF 10	DIST.		

1TW

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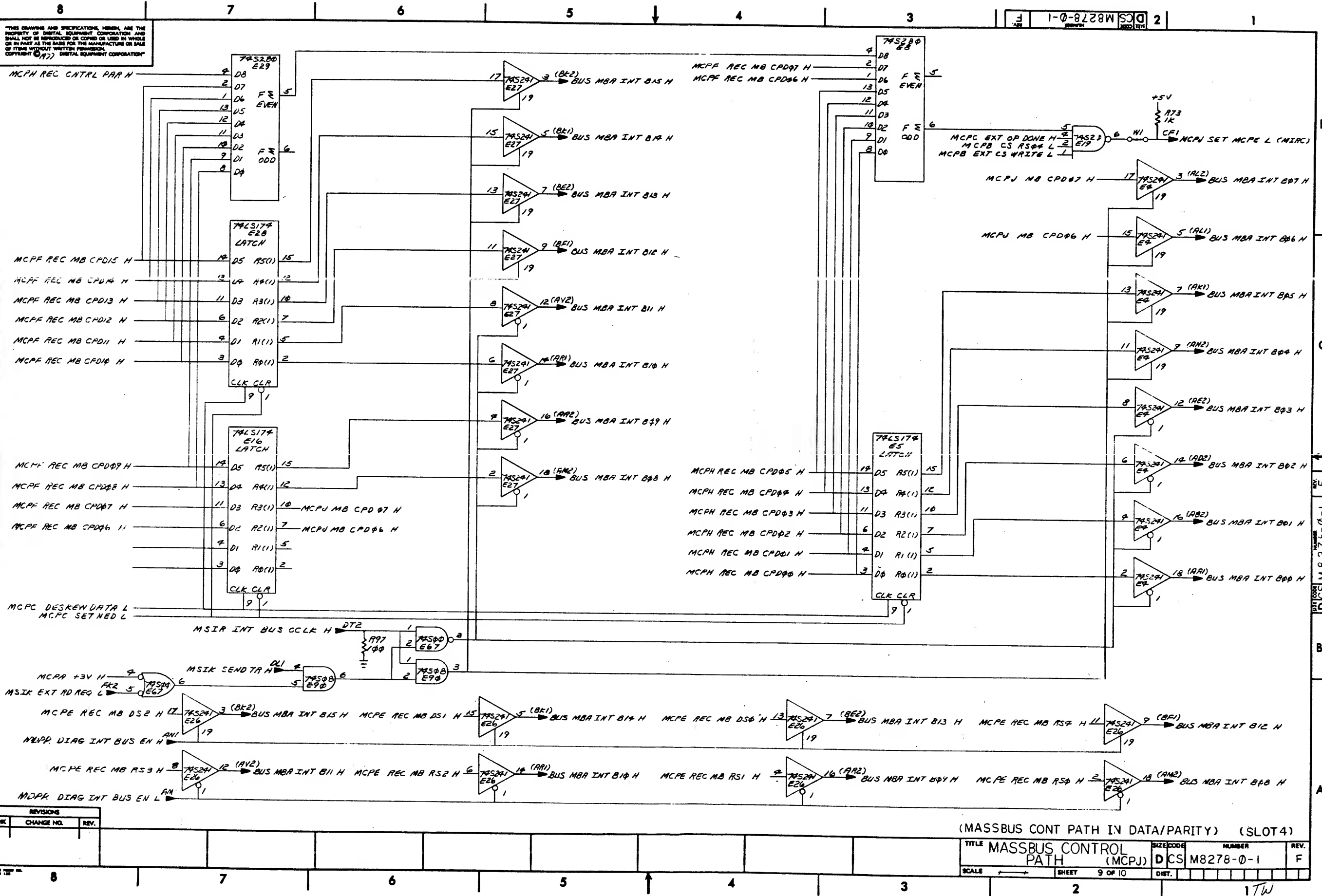
REVISIONS		
CHK	CHANGE NO.	REV.

(SLOT 4)  
(MASSBUS RECEIVERS/DRIVERS DATA 05:00,CPA,CTOD,OCC,EXC,FAIL)

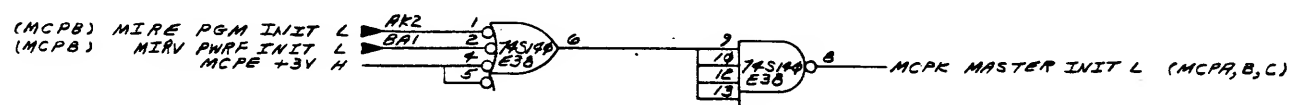
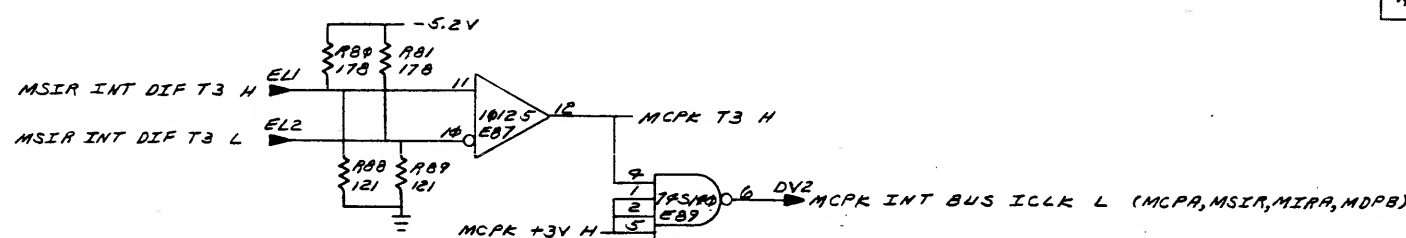
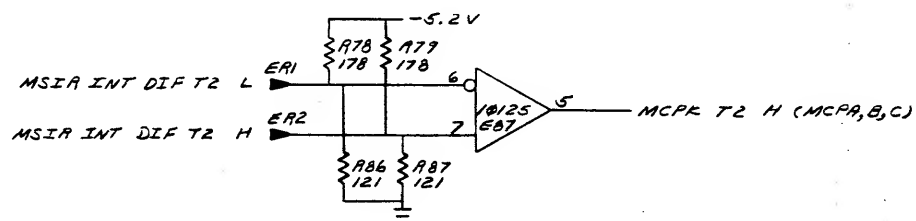
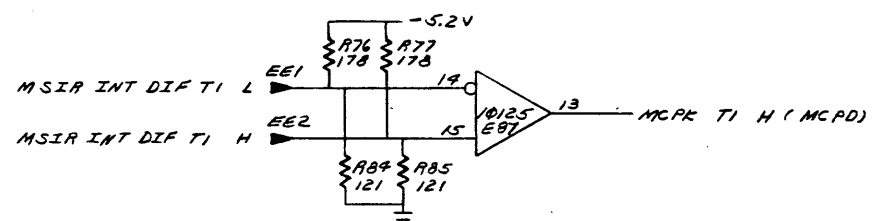
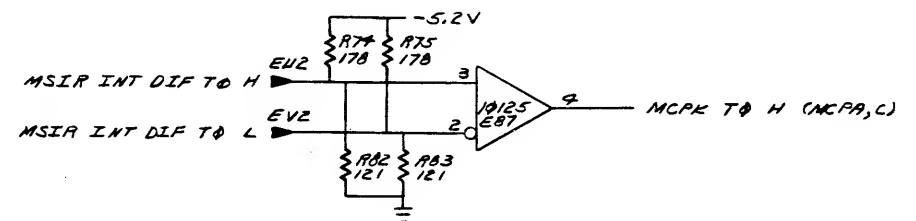
TITLE		MASSBUS CONTROL (MCPH)	SIZE CODE	NUMBER	REV.
SCALE		1:1	SHEET	8 OF 10	DIST.

DCS M8278-0-1

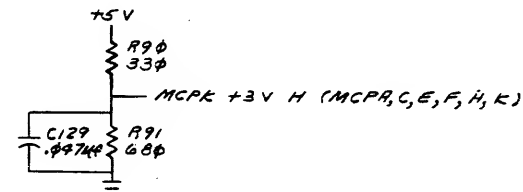
1TW



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MSIC UNJAM L BE1 THIS SIGNAL NOT USED ON BOARD, BUT IS BROUGHT TO A FEED THRU.



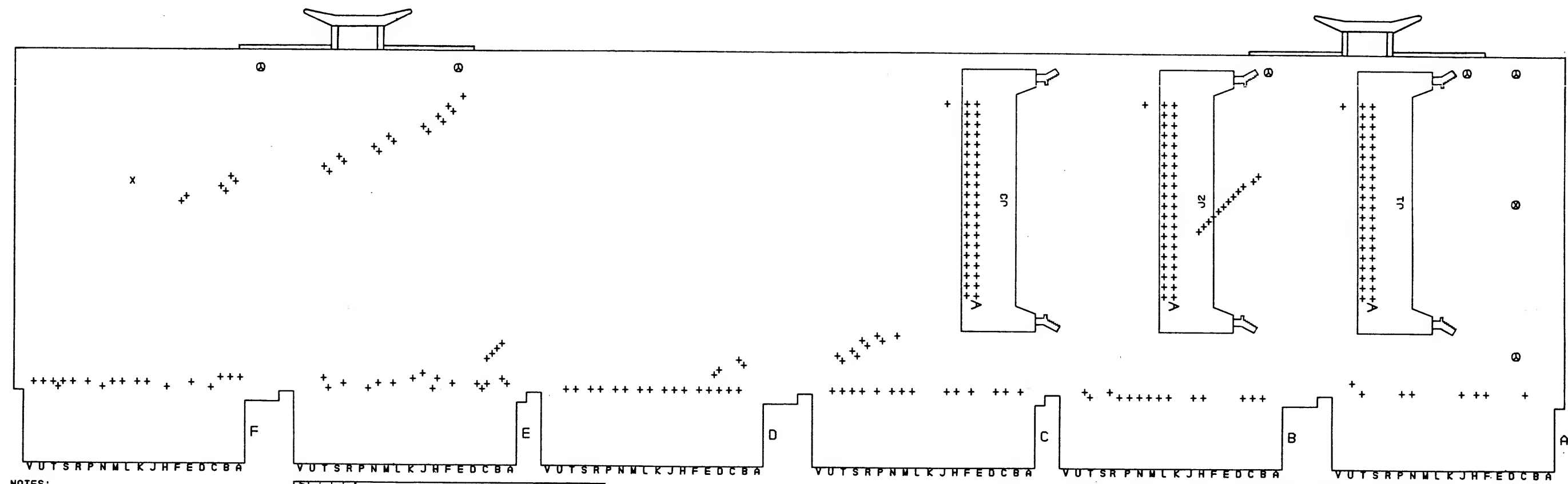
REVISIONS		
CHK	CHANGE NO.	REV.

(MCP CLOCKS, INIT)				(SLOT 4)			
TITLE MASSBUS CONTROL PATH (MCPK)				NUMBER DCS M8278-0-1			
SCALE				SHEET 10 OF 10			
				DIST. 1TW			



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COMPONENT SIDE VIEW



NOTES:

CHANGE NO	REV
1	A
P. J. 13 MAR 78	
K. OKIN	
L. D. 5/1/78	

CHANGE NO	REV
1	A
P. J. 13 MAR 78	
K. OKIN	
L. D. 5/1/78	

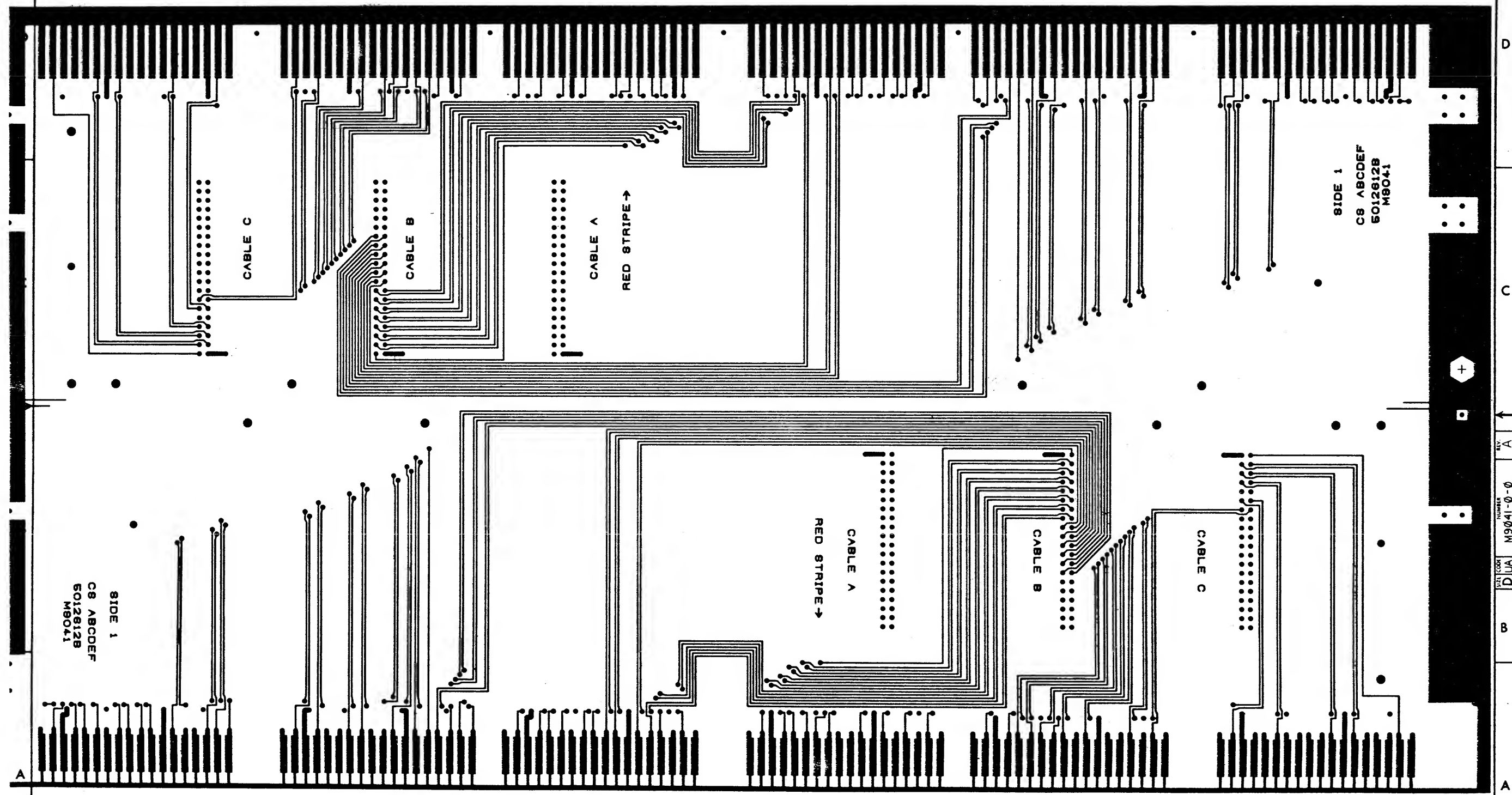
ETCH REV.	B
P.C. DESIGN DATA BASE REV.	B

SIGNATURES		DATE	digital			
DRN. <i>M. J. Janssen</i>		4-4-78				
CHK'D. <i>R. J. Janssen</i>		7-6-78				
ENG. <i>K. J. Janssen</i> 9764		5-23-78	TITLE			
PROJ. ENG. <i>K. J. Janssen</i> 9764		5-23-78	MASSBUS PADDLE CARD			
PROD. <i>M. J. Janssen</i>		7-5-78				
SCALE 2/1		SIZE	CODE	NUMBER	REV	
SHT. 1 OF 5		0	UA	M9041-0-0	A	
NEXT HIGHER ASSY: B-DD-M9041-0						

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REV. A  
DUA M9041-0-0  
DUA 3000 1210

LAYER 1



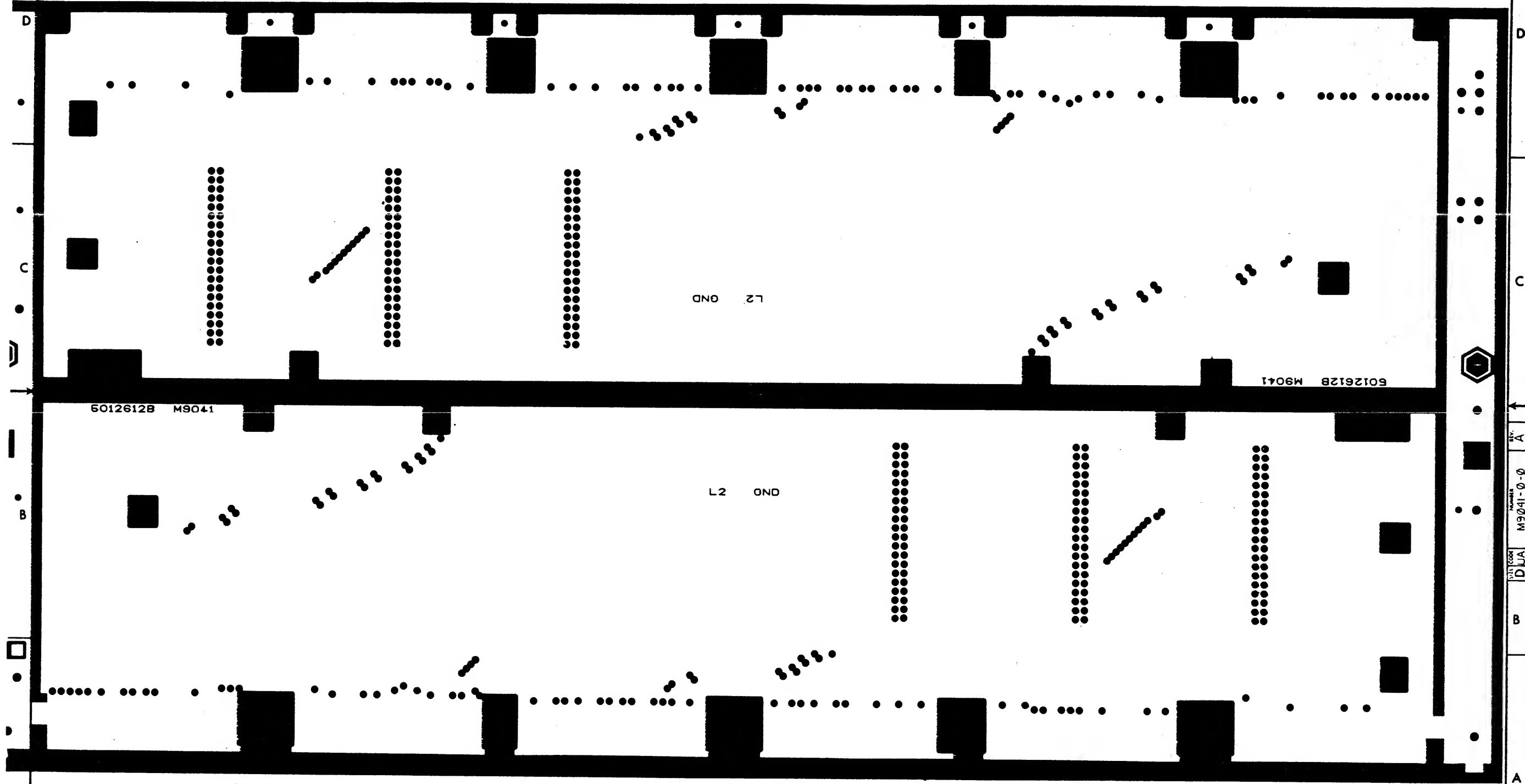
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		SIZE CODE	NUMBER	REV.
MASSBUS PADDLE CARD		DUA	M9041-0-0	A
SCALE	2-1	SHEET	2 OF 5	DIST.

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REV. A  
DUA  
M9041-0-0  
2

LAYER 12



REV. A  
DUA  
M9041-0-0

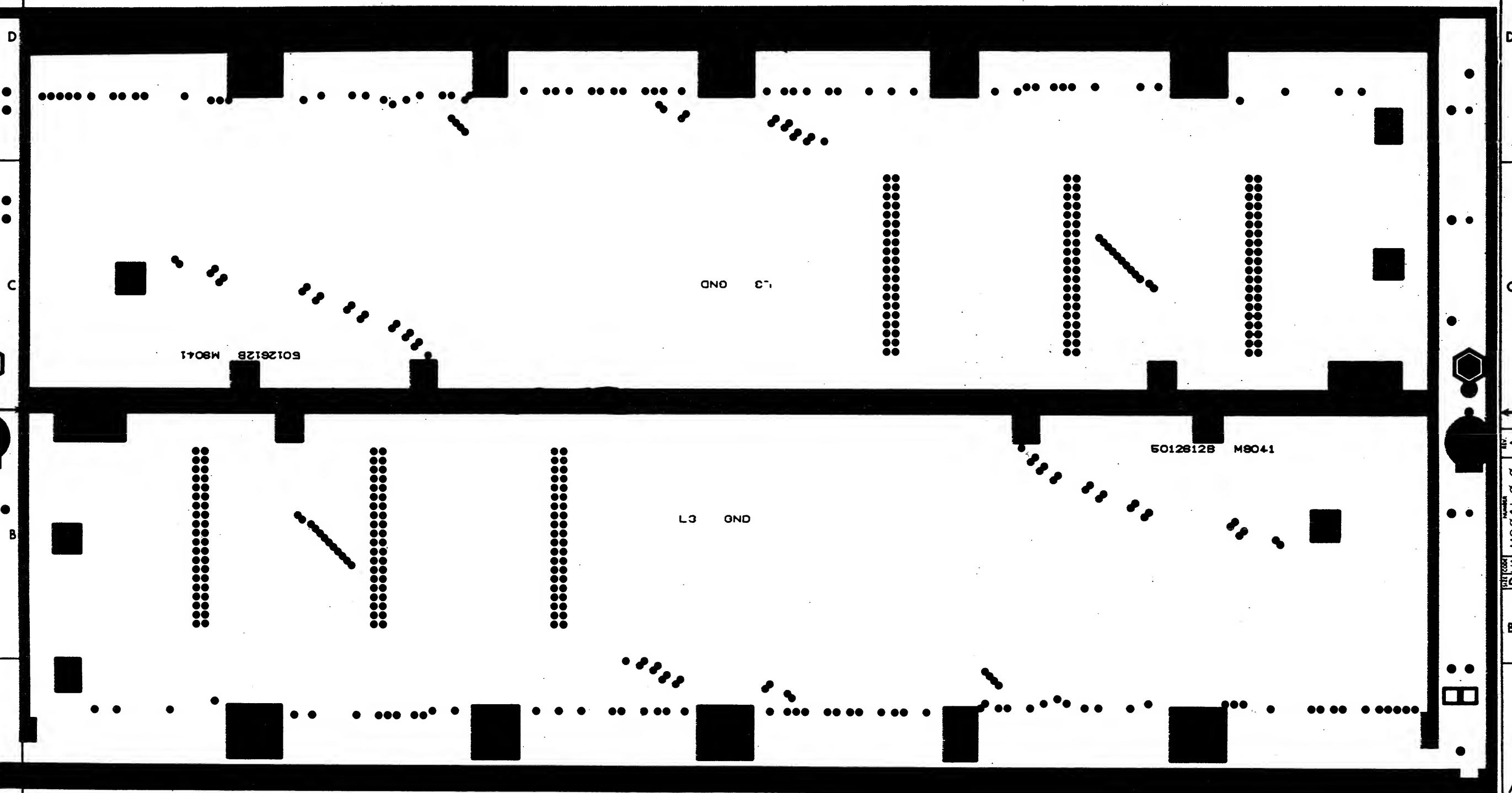
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE  
MASSBUS PADDLE CARD  
SCALE 2-1  
SHEET 3 OF 5  
SIZE CODE  
DUA  
NUMBER  
M9041-0-0  
REV.  
A

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E R34AJ

0-0-1406W DUA M9041-0-0 2



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		SIZE CODE	NUMBER	REV.
MASSBUS PADDLE CARD		DUA	M9041-0-0	A
SCALE	2/1	SHEET	4 OF 5	DIST.

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AYER

0-0-1706W M9041 2

L4

MASSBUS PADDLE CARD  
6012612B M9041  
SIDE 2

MASSBUS PADDLE CARD  
6012612B M9041  
SIDE 2

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		SIZE CODE	NUMBER	REV.
MASSBUS PADDLE CARD		D UA	M9041-0-0	A
SCALE	2/1	SHEET	5 OF 5	DIST.

LINE	ITEM	DOCUMENT NO.	PART NO.	DESCRIPTION	QTY	REFERENCE DESIGNATORS
1	1	D-MD-5012612-0-0	5012612-00	M9041 PC BOARD	1	
2	2		1209941-02	HEADER 100 40POS RT ANGLE	3	J1,J2,J3
3	3		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
4	4		9006732-00	EYELET, ROLLED FLANGE, .121 OD X .219 LG	4	
5	5		1209941-03	HEADER RT ANGLE LEFT LATCH FOR	3	
6	6		1209941-04	HEADER RT ANGLE,RIGHT LATCH FOR	3	

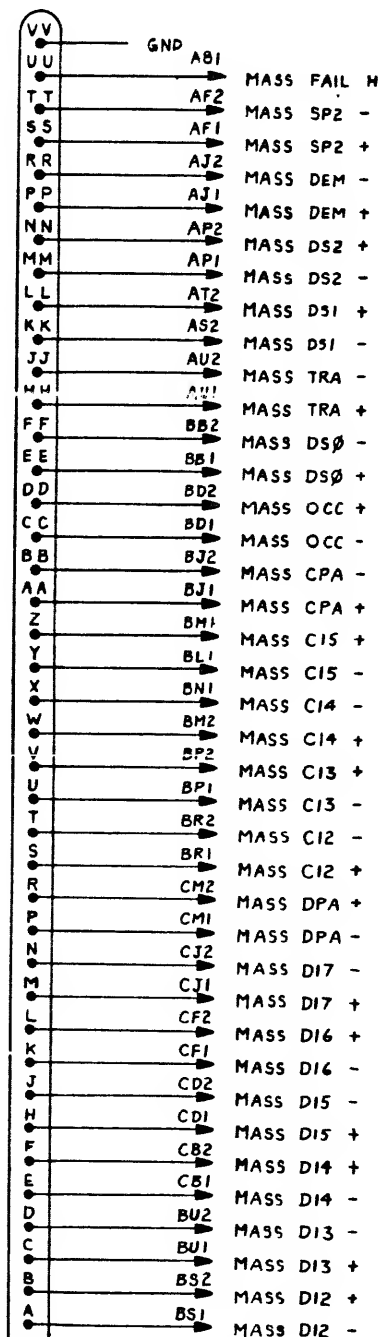
7 NOTE: 104866

REVISION HISTORY			VARIATIONS FOR THIS ASSY.		
CHK	ECO NO	REV	FIRST USED ON:		
P.G	00001	A	MADE BY: F.MULLIGAN DATE: 13-MAR-78		
			CHECKED: L.GIAMMARINO DATE: 13-MAR-78		
			DSN.ENG.: K.OKIN DATE: 13-MAR-78		
			PROD.: M.TERELLA DATE: 13-MAR-78		
			RESP.ENG.: K.OKIN DATE: 13-MAR-78		
			ASSY.NO.: D-UA-M9041-0-0		

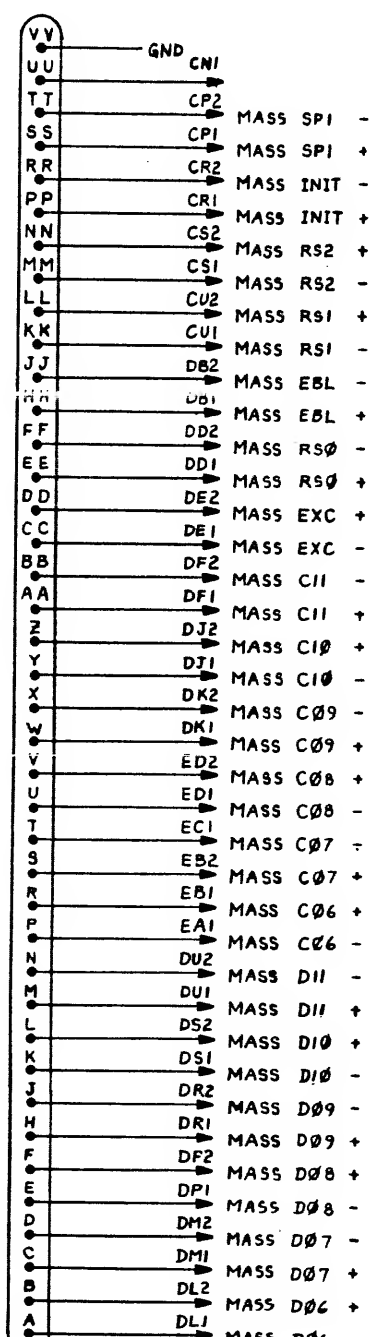
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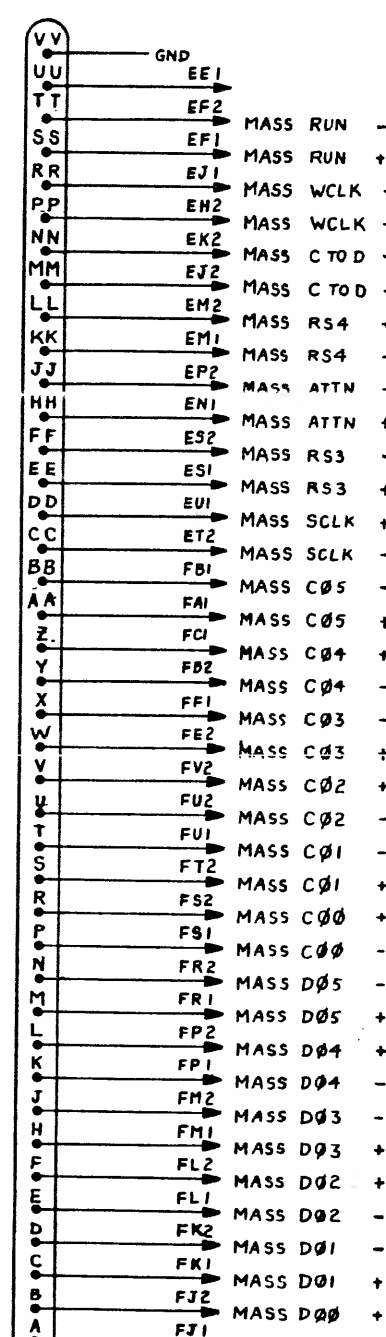
CABLE CONNECTOR 12-09941-02  
3 REQUIRED



MASS BUS CABLE "C"



MASS BUS CABLE "B"



MASS BUS CABLE "A"

GND  
AC2, BC2, CC2, DC2,  
AH1, BH1, CH1, DH1,  
AN2, BN2, CN2, DN2,  
AT1, BT1, CT1, DT1,  
EC2, FC2,  
EH1, FH1,  
EN2, FN2,  
ET1, FT1

(SLOT 5)

DRN. 0776	4-20-77	FIRST USED ON	000001
CHK'D. J. J. J.	5-17-77	TITLE	MASSBUS PADDLE CARD
ENG. J. J. J.	5-17-77	SIZE	D
PROJ. ENG. J. J. J.	5-17-77	CODE	CSM9041-0-1
PROD. J. J. J.	6-1-77	NUMBER	A
NEXT HIGHER ASSY.			
SCALE	1 OF 1		
SHEET			



